

JAN 2 1939

NUMBER  
1938

# BUSINESS WEEK

WEEK  
AGO

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YEAR  
AGO



**1939—Television Year**  
A Report to Executives on the who, what,  
where, when and how of a new industry.

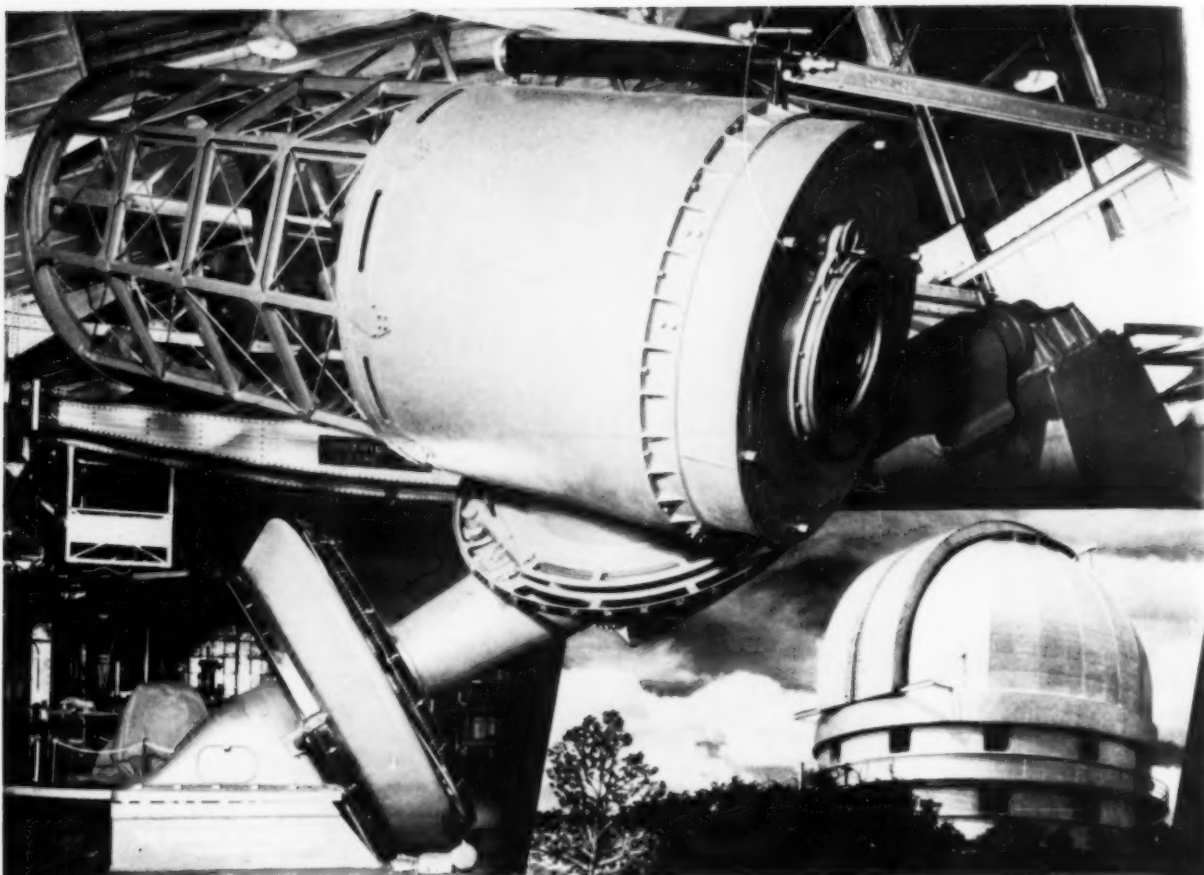
BUSINESS  
INDICATOR

The iconoscope camera points into the business outlook.

PUBLISHED BY THE MCGRAW-HILL PUBLISHING COMPANY

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ANN ARBOR MICH

COPY



The McDonald Observatory, Mt. Locke, Texas—  
and 82-inch telescope—  
designed and constructed by The Warner & Swasey Co.

## Telescopes and Turret Lathes—

**made in the same shop,  
by the same craftsmen,  
to the same standards.**

Unless you get *precision* with your turret lathes, you waste money in scrap loss, and you limit your plant in the work it can do, the orders your salesmen can take.

Precision is a sacred tradition at Warner & Swasey . . . Some of the greatest telescopes in the world bear the Warner & Swasey name. And the

very men who created them, engineered their almost unbelievable accuracy, and built these world-famous instruments, are the same men who design and build your Warner & Swasey Turret Lathe.

Perhaps that explains what thousands of turret lathe users have proved—that Warner & Swaseys assure a finer product, easier and more dependable operation, greater production, longer life with lower maintenance. Advantages like these mean lower costs in your plant and greater operator-satisfaction. Both are important today. Let us send a man this week to prove you can get these advantages with Warner & Swaseys.

**WARNER  
&  
SWASEY**  
Turret Lathes



**YOU CAN TURN IT BETTER, FASTER, FOR  
LESS...WITH A WARNER & SWASEY**

## BIG BUSINESS—NO. 12



## The Cure for Low Incomes

A STEADY FLOW of new capital into private business since 1900 was accompanied by production gains that tripled the per capita income of the country. This represented the greatest improvement in living standards ever accomplished by any people in so short a time. But despite such economic progress, the incomes of millions of families are still insufficient to provide them with a suitable standard of living.

The cure for low incomes is to increase the total national income, so that there will be more to divide. This can be accomplished only through an increase in the value of the country's total production. The more we produce, the more there is for everyone to share.

The national income in our

most prosperous year to date amounted to only \$665 per capita. This should make it obvious that mere redistribution of our present national income is not the answer to the problem. A Government economist has estimated that production 55% in excess of 1929 levels would be necessary to raise the incomes of all American workers to a minimum of \$200 a month.

We need a level of production substantially higher than anything yet achieved. Production processes must be improved, and new products created. This means that new capital must be invested.

The free flow of capital into private business and elimination of restrictions on production are the conditions necessary for further income progress.

*As bankers for industry, and as trustee for the funds of others,  
it is part of our responsibility to contribute something to a  
better understanding of the facts about private business.*

## BANK OF NEW YORK

48 Wall Street—New York

UPTOWN OFFICE: MADISON AVENUE AT 63RD STREET

Established 1784

Personal Trusts Since 1830

## Banking for Industry



A TOWER OF STRENGTH

## BANKERS TRUST COMPANY

16 WALL STREET, NEW YORK

FIFTH AVE. AT 44TH ST. 57TH STREET AT MADISON AVE.

LONDON: 26 OLD BROAD ST.

*Member of the Federal Deposit Insurance Corporation*

## THIS BUSINESS WEEK



"Lights . . . action . . . camera!" As this week's cover suggests, the familiar jargon of the movie lot becomes a commonplace of the radio broadcasting studio as engineers and program directors preen television for its official debut in 1939. Of course, one swallow doesn't make a summer, nor does the debut of one or two regular transmission services make an industry. But there's no gainsaying the fact that, at last, the industry is definitely scheduled to be born. In its infancy it confronts a host of problems, the solution of which is a matter of prime importance to those far-flung business interests that will eventually participate in or be served by it. That's why in this issue, **BUSINESS WEEK** takes 15 pages—from 17 through 31—to examine and appraise in understandable business language the who, what, where, when, and how of television.

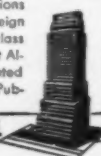
ASK ANY SCHOOLBOY—provided you can find one who isn't tired of answering questions—and he'll tell you there are 52 weeks in the year. But in five years out of every 28 the publishers of a weekly magazine like this one bump up against the disconcerting fact that there's a fifty-third week. At least, there's a fifty-third issue of the publication. Actually, that fact is disconcerting only to advertising men who think in terms of 13, 26, or 52 insertions a year.

To this column conductor a fifty-third issue isn't at all disconcerting, for

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**A McGRAW-HILL**



**PUBLICATION**

it offers a little more leeway to wind up unfinished business of the year. For example: that freight train and locomotive on our Oct. 15 cover.

Since that picture appeared we have received (and satisfied) requests for extra copies from more than 200 readers. And virtually everyone of the 200 has wanted to know on what line the train ran, what kind of a locomotive it was, where and when the picture was taken.

Reasonable requests—all, but up to the present unanswerable, for the picture had been supplied us by a photograph agency some months beforehand and kept in file against that day when we would want just such a cover picture to symbolize the rise in carloadings. In the interim all the identifying data had been lost. How? Ask any standard-model file clerk.

### Mr. Soule Sees It Through

WE WERE STUMPED. But not reader George Soule of West Hartford, Conn. Mr. Soule, who takes his locomotives seriously, was bent on unraveling the mystery. To his first inquiry we could only lamely suggest that it might be Chesapeake & Ohio's train. Mr. Soule followed up. From "George Washington's Railroad" came the reply which Mr. Soule had already received to an inquiry that he had addressed on his own hunch to the Boston & Albany Railroad: "Not ours."

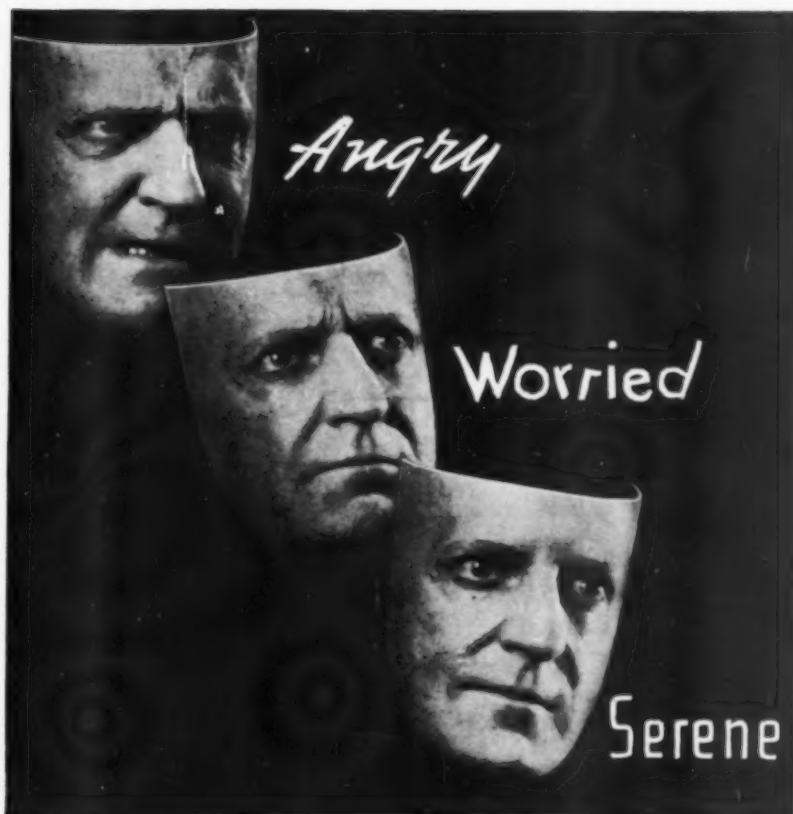
C. & O., however, said that the locomotive looked to them like one used by the Norfolk & Western. So to N. & W.'s headquarters in Roanoke, Va., went another inquiry from the indefatigable Mr. Soule.

Yes, it was Norfolk & Western's locomotive, admitted Floyd E. Chabot, assistant editor of N. & W.'s magazine. Furthermore it was No. 2132, a Class Y-6 engine built in the line's own shops at Roanoke. Furthermore, it was "one of the most powerful locomotives in the country." Still furthermore, the picture was taken by Norfolk & Western's own photographer on March 4, 1936, at a little station called Singer, "just a few miles west of Roanoke on our main line."

### The Missing Link

MR. SOULE thinks he's entitled to a one-year renewal of his subscription, free of charge. So do we. And if Mr. Soule or any other reader can now explain to Mr. Chabot's satisfaction how Norfolk & Western's own picture got in the hands of the picture agency, we'll give away another free subscription.

There are no hard feelings involved—Norfolk & Western says it was only too happy to see its picture on BUSINESS WEEK's cover—but it would like to know how it got there. Just human curiosity—the kind that makes a man try to identify one locomotive out of America's forty-odd thousand.



## How Do You Face Credit Losses?

Nothing is gained by "fixing the blame" or worrying over credit losses. In spite of all defenses, they will occur again -- and yet again.

Wise executives face unexpected credit losses with equanimity by providing for them in advance. And, thousands find that the preferred method -- the most practical and economical way to establish a "reserve for losses" -- is through

### American Credit Insurance

"American" goes as far as you like in assuming responsibility for payment of your debtors' debts. You may cover all accounts or special groups -- good customers, "doubtful" accounts, non-rated debtors. If they fail, or simply fail to pay, you will be reimbursed promptly for goods shipped under the terms of the policy.

Manufacturers and Jobbers whose capital turnover is retarded by slow-pay customers, will be especially interested in the "American" C-F plan of liquidating delinquencies. Ask any representative for full information.

## AMERICAN CREDIT INDEMNITY CO.

of New York

J. F. McFadden, President

Chamber of Commerce Building

St. Louis, Mo.

Offices in all principal cities of United States and Canada

# What to put in the Annual Report— How to make it clear and interesting—



"The experience of our Company for a period that now extends over almost ten years indicates that the utmost candor, clarity and sincerity in reports to stockholders yield abundant returns in building confidence and good-will with the investing public."

H. W. PRENTIS, JR.  
President  
Armstrong Cork Company

## Look up in this book:

- treatment of economic and social aspects of business
- treatment of financial and operating information
- types of annual stockholders' reports
- legibility
- making photographs tell a story
- follow-ups on annual reports
- examples of annual reports to employees
- employee meetings to hear annual report
- policy of frankness in public relations
- community reports and activities, etc.

Here is a book to help you sell business and industry through more human reports. It shows plainly, by numerous case examples, how to do the job, and concisely discusses the fundamental factors, needs, methods, involved in the trend taking place in this phase of public relations.

Just  
Published—

## MAKING THE ANNUAL REPORT SPEAK FOR INDUSTRY

Compiled by  
National Association of Manufacturers  
James P. Selva and Morris M. Lee  
With a Foreword by Robert L. Lund  
Chairman, Public Relations Committee  
National Association of Manufacturers  
187 pages 8½ x 11, illustrated, \$4.00

A STUDY of the new trend in annual reporting to stockholders, employees, and the general public, this book brings together for the first time the best experience of a large number of industrial organizations in "humanizing" and "modernizing" their annual financial and operating statements.

It shows the many varied approaches that have been made to the increasingly important problem of building understanding of company activities among those who should be a company's closest allies—its stockholders and employees.

The general problem and approach are clearly but briefly outlined, and much of the most practical sort of help for firms who wish to adopt these methods is given in actual specific examples of the manner in which companies—large and small—have made their financial statements readily understandable and have utilized the annual report as a medium for discussing such vital topics as employment relations, taxation, distribution of company's income, etc.

SEE THIS BOOK 10 DAYS—SEND THIS ON-APPROVAL COUPON

McGraw-Hill Book Company, Inc., 330 W. 42nd St., New York, N. Y.

Send me *Making the Annual Report Speak for Industry* for 10 days' examination on approval. In 10 days I will send \$4.00 plus a few cents postage, or return book postpaid. (Postage paid on orders accompanied by remittance.)

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(Books sent on approval in U. S. and Canada only.) BW 12-31-38

## NEW BUSINESS

### Hot from the Hearing

IMPORTANCE OF Temporary National Economic Committee's hearings induced the Bureau of National Affairs, Washington, to offer printed, verbatim record of testimony each morning after it is given. Said to be the first time such a service has been afforded any Congressional committee hearing. . . . A 75-bell carillon will be made by J. C. Deagan, Inc., Chicago, for Florida state exhibit at New York's World's Fair; later it will be installed in the Stephen Foster memorial on the banks of the Suwannee River at White Springs, Fla. . . . John Ringling North is said to have completed negotiations with American Federation of Actors to ensure next season's run of Ringling circus, which shut down in Scranton, Pa., last June because of labor troubles.

### Unique Prize

PRIZE IN A recent sales contest for branch managers of Underwood Elliott Fisher Co. was privilege of phoning winning records to M. S. Eylar, company vice-president, then traveling in Europe. . . . Denver public schools will get visual education via special motion pictures made there with the aid of American Council on Education, Washington. . . . Atchison, Topeka & Santa Fe authorizes buying of 30 oil-electric switching locomotives to cost \$2,250,000. . . . A 1939 advertising campaign will promote Controlastic, a new elastic yarn developed by Firestone Rubber and Latex Products Co., Fall River, Mass.

### San Francisco Hits Back

ROUSED BY LOS ANGELES' invasion of its traditional trade territory (BW—Dec 3'38,p4), San Francisco Sales Managers Association and the S. F. Chamber of Commerce plan huge "Sell San Francisco" drive with a rally at Municipal Auditorium as curtain-raiser. . . . Cheong-Yin Wong, Chinese post-grad student, produced a seedless watermelon at Michigan State College, East Lansing. . . . Pan American Airways received 90 offers for three polar bears rescued by a pilot from a Point Barrow ice floe and offered with free transportation to municipalities. . . . Demand for albino crocodile to head cast in Hollywood production of "Her Jungle Love" was met by whitening 255-year-old alligator, Ponchartrain Bill, with aluminum paint.

### Flooring by the Acre

E. L. BRUCE Co., Memphis, Tenn., claims all-time flooring order record in 7,000,000 sq. ft. of hardwood blocks for Metropolitan Life's \$65,000,000 housing project in the Bronx, New York. . . .

Radio Corp. offers a "Magic Demonstrator" which starts phonographic sales spiel when customer waves hand in front of electronic device; similar installation in "Nipper," famous Victor Dog, makes him bark and invite customer into store. Marty Walker, New York, advertises overcoats for men made from the fleece of Andean vicunas, selling for \$900.

### Therapeutic Air Conditioning

DR. ALBERT G. YOUNG, of Corey Hill Hospital, Brookline, Mass., told convention of the American Society of Refrigerating Engineers that studies showed no recurrent attacks of rheumatic fever among patients entering that hospital after it was equipped with complete air conditioning. . . . First cash prize of \$7,500 in American Can Co.'s \$100,000 "Keglined" display contest went to the proprietor and employees of the White Star Market and Grocery, Rochester, N. Y. . . . Seventeen air transport companies have pledged \$150,000 for a co-operative advertising campaign by the Air Transport Association to boost air travel, the money to be paid over if manufacturers of equipment raise an equal amount. . . . Ralph Hitz' New York hotels, the New Yorker and Belmont Plaza, announce that, regardless of World's Fair demands, they are going to take care of old friends first next year.

### Bad Business

BETTER BUSINESS BUREAUS report new schemes or variations of old ones which business men should watch. Following the promotion of whisky warehouse receipts, speculators can now take a chance on tobacco warehouse receipts. An itinerant vendor is selling cheap electric shavers, representing them as deluxe makes. Home study schools "guarantee" youngsters jobs at high pay. "Capitalists" advertise that they have money to invest but charge applicants for funds an "appraisal fee." Questionable termite exterminators claim Federal Housing Administration endorsement.

### When Children Buy

HERE'S SOMETHING REALLY NEW in marketing research—a study of the shopping habits of 4,322 children, aged 5 to 12. *True Story* made it. Questions: "1. If your mother sent you to buy a box of cleanser for the sink, what kind would you get?" "2. What kind of toothpaste or powder do you buy for your mother?" "3. What kind of soap do you use?" "4. What is your favorite fruit?" "5. What do you think is the best brand of dog-food?" We haven't space for the answers except to No. 4. Apple was preferred by 28.5%, banana by 24%, orange by 15%.

### Bicycles on the Upgrade

U. S. Census Bureau reports continuance of the bicycle revival; output in 1937 was 1,130,000, an increase of 474,000 or 72.2% over 1935.

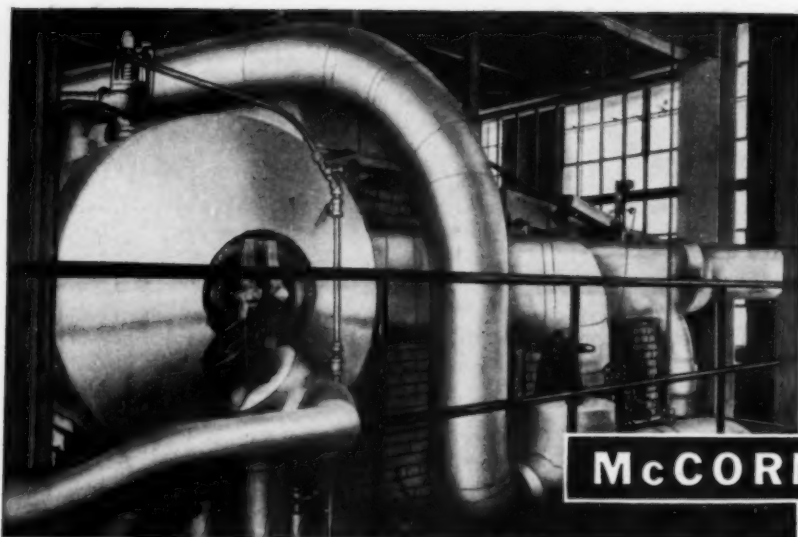
## A Duty . . . Well Done

In seeking to provide security for his heirs, a thoughtful man makes a will. By the same move he gains peace of mind himself . . . for he is then happily entrenched in the knowledge that he has done what he could to protect the future of those who depend on him. ¶ To carry out the provisions of his will, this Trust Company offers its experience gained as executor and trustee for generations. It was the first company chartered to act as trustee.

## City Bank Farmers Trust Company

CHARTERED 1822

Head Office: 22 William St., New York; Uptown Office: Madison Ave. at 42nd St.;  
Brooklyn Office: 181 Montague Street



**McCORMICK-DEERING**

## **K & M** insulation adds efficiency to International Harvester Co. power plant

To assure efficiency in the power plant at East Moline Works, International Harvester Company (Incorporated) installed heat insulation made by K & M. This is a natural choice, for The Keasbey & Mattison Company has devoted considerably more than half a century to the development of high-quality, high-efficiency insulation products.

Starting as a tiny two-man business more than 65 years ago, The Keasbey & Mattison Company specialized from the start in Magnesia, and later, in Asbestos products. Pioneering in insulation materials, this Company rapidly grew to an important industry, and today employs 2000 persons. It is a national institution with nation-wide facilities.

**K & M**

As an innovator of improved materials, of advanced methods of distribution, and of scientific product application, K & M is one of the manufacturing leaders of America.

## **ASBESTOS AND MAGNESIA PRODUCTS**

**KEASBEY & MATTISON COMPANY**  
AMBLER, PENNA.

District Sales Offices in principal cities

K & M "Featherweight" 85% Magnesia, one of the foremost products in the extensive K & M line, is an outstandingly efficient form of heat insulation for temperatures up to 600°F. Its industrial uses are almost endless. K & M cooperates with its distributors by making available to users constructive engineering advice that frequently produces extra economies. For quality products and intelligent service, you can rely upon K & M Distributors.



COPYRIGHT 1938 BY KEASBEY & MATTISON CO.

## WASHINGTON BULLETIN

WASHINGTON (Business Week Bureau) —With Hopkins in the cabinet plotting grand schemes for cooperation with business to put 1,000,000 to 1,500,000 men back to work—and himself into the Presidency—interest now centers on the labor situation. Congress is listening attentively to business demands for a slashing of the Wagner Labor Relations Act that would go beyond what the American Federation of Labor wants.

Changes in the Labor Relations Board are being hotly discussed. Chances increase that Donald Smith's renomination will be either withdrawn or beaten in the Senate. Embarrassing moves, accompanied by impeachment talk (particularly in the A.F.L.) are being made against Edwin Smith.

### Miss Perkins Entrenched

SANE DIRECTION of the Labor Department, as well as of the NLRB, has become almost a slogan. Madame Perkins is under a heavy barrage which doesn't come entirely from business. Among those shooting at her are the boys 'way over on the Left Wing. They have been demanding that the President put Murphy of Michigan in her job.

The President is loath to do any forcing and the probability is that, unless he discovers some way of pushing her upstairs, we shall continue to boast of a lady Labor Secretary.

### Engineering Relief

WHILE HOPKINS IS BUSILY wooing business men to the New Deal, with some measure of success because of his conduit to the White House, WPA will be better managed by his successor. This is wholly apart from any assumption that relief politics will be suppressed. For several years WPA's chief engineer, Col. Harrington now will have a chance to tighten up the scheduling of WPA's work program.

To the extent that WPA's vast labor pool can be used to push national defense, it will be converted into a sort of auxiliary to the army engineer and quartermaster corps. Meanwhile, the National Youth Administration, a subsidiary WPA organization, pushes plans for the training of pilots and mechanics. In this, CCC also will play an important part.

### Learners' Wages

TEXTILE AND GARMENT MAKERS can expect only meager wage differentials for learners. The wage-hour administration leans against differentials. Some officials

feel that new plants in regions unstocked with experienced workers should be given some latitude but Administrator Andrews is wary of seeming to encourage further migration for labor exploitation.

Such small exceptions as may be authorized will be withheld till after the textile committee's minimum wage recommendation is ordered into effect by Andrews early in year. The minimum will be at least 30¢, anticipating by eight months the statutory boost of 5¢ in the present minimum rate.

### They're "After" ICC

THE CRAB-LIKE PROGRESS of a rail rehabilitation program is more of a threat to the Interstate Commerce Commission than a promise for the railroads. It's already apparent that reorganization of the ICC is the Administration's object.

An attempt will be made to subject the commission's administrative work to White House direction, as in the case of the Civil Aeronautics Authority, where divided responsibility to Congress and the President is already causing trouble.

### Investment Trust Police

THE SECURITIES AND EXCHANGE Commission is pushing its study of investment trusts, with a view to submitting its recommendations to Congress sometime in March. The idea is to strengthen the investment trust medium by giving SEC police power to curb abuses which have brought this channel of investment funds under suspicion.

### Soap Crackdown Due

THE FOOD AND DRUG ADMINISTRATION is determined to crack down on false and misleading claims made for soap as a cosmetic, despite specific exclusion of soap in the definition of cosmetics in the new food and drug law. Enforcement officials insist that, in excluding soap, Congress didn't give soap makers a license to make any claims they wish. F&DA will defend its stand in court if necessary.

### Wheeler Going Along

INDICATIONS NOW are that Sen. Wheeler, chairman of the Interstate Commerce Committee, will go along with Roosevelt on rail legislation, recognizing the railroads as vital to national defense. This argument will be used to justify low-rate interest loans for refunding bond issues, thus reducing fixed charges. It will also be used to justify easing the federal tax burden to a considerable extent. Repeal of the long-and-short-haul provision to give railroads more rein in fighting truck competition is so controversial that not much is expected there.

### Peace With Giannini

GIANNINI'S TRANSAMERICA will shortly be just as good as ever, so far as its stock exchange listing is concerned. Kissing and making up is under way between the Securities and Exchange Commission and the Federal Reserve, or, to be more specific, between Bill Douglas and Mariner Eccles.

Eccles was plenty sore when Douglas went after his friend Giannini but Douglas has seen the light—told Eccles he should have consulted him before acting and is sorry he didn't. Perhaps a little bird who told Douglas that, if the bitterness continued, Federal Reserve would stop consulting SEC on margin requirements, had something to do with it.

### Stalemate on Banking

PROSPECTS CONTINUE that there will be no banking legislation this coming session, but there is better feeling. Something happened when Carter Glass broke down and cried when his plaque was unveiled down at the Federal Reserve Building. Peace on Earth and Good Will to Men seemed triumphant as Glass, Eccles and Steagall, chairman of the House committee, were photographed together.

But Glass still feels that the Reserve Board is his baby. Doesn't want a single diaper pin moved without his approval. He regards the system as a device for permitting banks to cooperate in times of stress. Eccles regards it as a central bank.

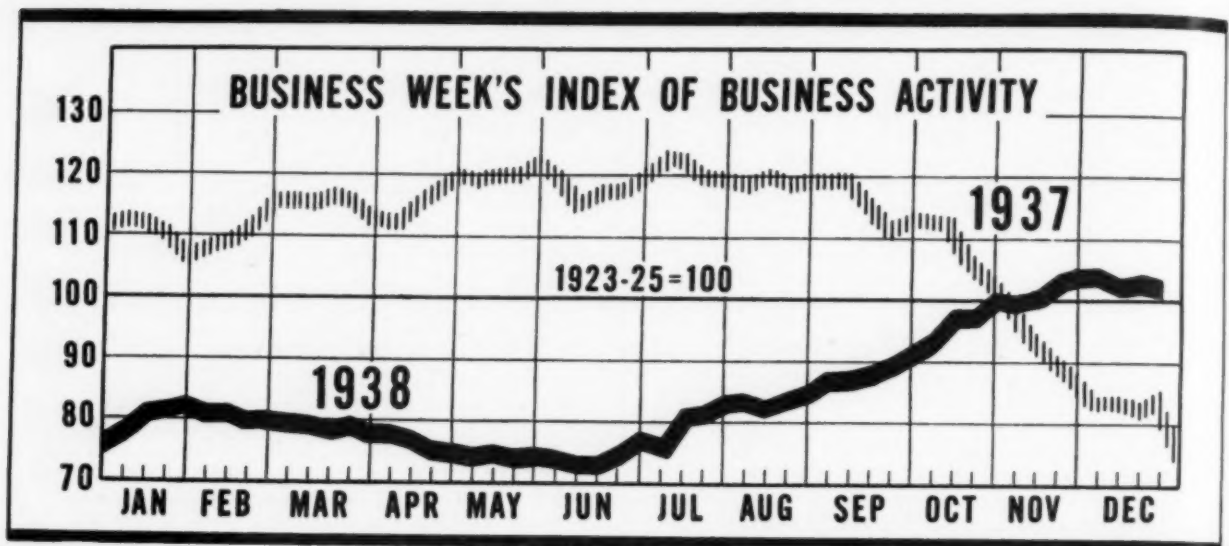
This situation makes new legislation difficult—especially as Steagall's committee insists on protecting the unit banks—both Reserve members and non-members—and the inflationist group wants to limit Reserve Board's powers on rediscount rates and other credit-control devices.

### Hopkins Faces Smearing

HARRY HOPKINS WILL BE CONFIRMED as Secretary of Commerce but not until he and WPA are as thoroughly smeared as his Senatorial critics can plaster the mud. Full use of the report of the committee on campaign expenditures, headed by Sen. Sheppard, will be made.

Even Republicans are not anxious to defeat him; they think to do so might arouse sympathy whereas to confirm him would be to keep an anti-New Deal asset active. Vandenberg's point that the President should have the right to pick his own official family finds general agreement but so also does his point that this must not be construed as a vote of confidence in either Hopkins or WPA.

## THE FIGURES OF THE WEEK



### THE INDEX

#### PRODUCTION

	Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
★ Steel Ingot Operations (% of capacity).....	38.8	51.7	60.7	28.7	19.2
★ Automobile Production .....	92,890	102,905	84,930	40,918	67,230
★ Residential Building Contracts (F. W. Dodge, 4-week daily average in thousands).....	\$3,960	\$4,132	\$4,365	\$3,282	\$2,128
★ Engineering Construction Awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$11,805	\$12,163	\$9,734	\$7,731	\$6,841
★ Electric Power Output (million kilowatt-hours).....	2,363	2,333	2,184	2,019	2,085
Crude Oil (daily average, 1,000 bbls.).....	3,450	3,276	3,261	3,084	3,493
Bituminous Coal (daily average, 1,000 tons).....	1,352	↑1,365	1,388	868	1,535

#### TRADE

★ Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars).....	64	66	70	62	60
★ All Other Carloadings (daily average, 1,000 cars).....	37	37	39	31	40
Check Payments (outside N. Y. City, millions).....	\$5,493	\$4,148	\$4,097	\$3,952	\$4,977
Money in Circulation (Wednesday series, millions).....	\$6,943	\$6,858	\$6,763	\$6,402	\$6,681
Department Store Sales (change from same week of preceding year).....	+2%	-2%	-5%	-10%	—

#### PRICES (Average for the week)

Spot Commodity Index (Moody's, Dec. 31, 1931=100).....	142.6	140.6	141.2	140.2	150.1
Iron and Steel Composite (Steel, ton).....	\$36.37	\$36.38	\$36.37	\$38.51	\$38.90
Scrap Steel Composite (Iron Age, ton).....	\$14.92	\$14.92	\$14.92	\$12.08	\$13.75
Copper (electrolytic, Connecticut Valley, lb.).....	11.250¢	11.250¢	11.250¢	9.000¢	10.125¢
Wheat (No. 2, hard winter, Kansas City, bu.).....	\$0.66	\$0.67	\$0.63	\$0.77	\$0.96
Sugar (raw, delivered New York, lb.).....	2.87¢	2.87¢	3.00¢	2.68¢	3.20¢
Cotton (middling, New York, lb.).....	8.84¢	8.71¢	9.00¢	8.82¢	8.40¢
Wool Tops (New York, lb.).....	\$0.833	\$0.820	\$0.828	\$0.791	\$0.877
Rubber (ribbed smoked sheets, New York, lb.).....	16.46¢	16.22¢	15.74¢	14.08¢	14.85¢

#### FINANCE

Yield—Corporate Bonds (Standard Statistics, 45 issues) .....	5.86%	5.90%	5.78%	6.41%	5.77%
Yield—U. S. Bonds (average of all issues due or callable after 12 years)†.....	2.49%	2.48%	2.51%	2.53%	2.68%
Yield—U. S. Treasury 3-to-5-year Notes.....	0.69%	0.69%	0.72%	0.68%	1.26%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average).....	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate).....	%	%	%	%	1.00%
Business Failures (Dun & Bradstreet, number).....	229	216	191	249	231

#### BANKING (Millions of dollars)

Demand Deposits Adjusted, reporting member banks.....	16,129	16,221	15,916	14,936	14,423
Total Loans and Investments, reporting member banks.....	21,742	21,504	21,306	20,572	21,480
Commercial and Agricultural Loans, reporting member banks.....	3,857	3,872	3,869	3,916	4,617
Securities Loans, reporting member banks.....	1,420	1,426	1,276	1,220	1,536
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks..	10,051	9,776	9,811	9,263	9,177
Other Securities Held, reporting member banks.....	3,218	3,232	3,192	3,030	2,685
Excess Reserves, all member banks (Wednesday series).....	2,980	3,480	3,353	2,782	1,007
Total Federal Reserve Credit Outstanding (Wednesday series).....	2,656	2,600	2,587	2,591	2,658

#### STOCK MARKET (Average for the week)

50 Industrials, Price Index (Standard Statistics).....	126.8	126.4	124.8	111.6	104.0
20 Railroads, Price Index (Standard Statistics).....	31.6	30.6	29.9	26.1	31.3
20 Utilities, Price Index (Standard Statistics).....	62.6	62.7	63.5	59.0	58.1
90 Stocks, Price Index (Standard Statistics).....	101.5	101.1	100.1	89.7	85.1
Volume of Trading, N. Y. Stock Exchange (daily average, 1,000 shares).....	1,396	↑1,181	1,007	2,165	1,619

★ Factor in Business Week Index. † Preliminary, week ended December 24. ‡ Revised. § Date for "Latest Week" on each series on request.

# BUSINESS WEEK

December 31, 1938

## THE BUSINESS OUTLOOK

Now a year of broad industrial recovery comes to an end, and another year begins with a winter pause, which should be followed by an advance in the spring and early summer.

THE YEAR 1938 will go into the records as one of broad industrial recovery. It is true that the first half of the year saw a continuing decline in the business index, but this amounted altogether to only a very few points, nearly the whole of the recession having been completed by the turn of the year. From January to June, 1938, the decline was leveling off, and the groundwork was being laid for the revival that began in June. The speed of this revival turned out to be almost as great as that of the decline 12 months previously, and by mid-November a gain of 30 points, or 40% from the low of 75 in BUSINESS WEEK's index, had been registered. This meant that 60% of the total loss from the 125 figure touched in the summer of 1937 had been regained.

### Consolidating the Gains

The June-November rise was the main business development of the year 1938, and gives the right to summarize it as a year of rapid recovery. But the year is ending on a note of consolidation rather than further advance. Since mid-November no further progress has been made in general activity. Declines in some of the more dynamic factors, such as steel, residential building contracts, and automobiles, have been offsetting the continued advances in the secondary and slower moving factors such as electric power production and miscellaneous carloadings. As a result, the weekly index is just where it was six weeks ago.

### Outlook for Automobiles

There is, on the whole, good reason to think that the decline in automobiles will continue for the first two months of the year. It seems probable, despite various optimistic rumors emanating from the trade centers, that dealers have been well stocked up with cars in the last two months, and that, assuming no surprising change in retail sales in either direction during January and February,

a let-down from the 100,000-car rate of weekly production to a 75,000-car rate should be the next development. From March onward the trend of factory production would be immediately and wholly determined by the rate of spring purchasing of cars by the public.

### Predicting the Index

Meanwhile the winter months and severe weather will be working against any recovery in the construction indexes to supply the needed offsetting influ-

ence if general activity is to hold up. One may, therefore, expect that the secondary and slow-moving factors like electric power and carloadings will, in turn, cease their advance and perhaps momentarily turn down. For these reasons, a reaction of the general index from its recent peak of 105 to 95-100 range would not be unexpected. This would still leave it half way between the 1937 high and the 1938 low, and any such reaction would therefore not pass the bounds of the purely "technical."

### Advance in the Spring

Construction is the one item contained in the indexes of general activity which is most controlled by seasonal influences. In a year like 1939, therefore, in which the main stimulus to the whole economy is expected to come from construction, there is more reason than there would be in the average year to expect the index to rise more than seasonally in the spring and early summer. This means in particular that the public works contracts of the federal government, all of which have now been allocated, should come into actual construction in considerable volume by the spring months. As a result a strong impetus to the steel, cement, lumber, and other material suppliers should be felt, and through production, transportation, and fabrication a lift to the whole index of industrial activity should be seen. Beyond the winter pause, therefore, one can visualize a spring advance based on the government's spending program.

### Main Factors in 1939

Beyond the middle of the year the outlook is still far too uncertain to venture any sort of prediction. Favorable influences will be at work, but they may easily be offset. One such influence is the trend toward political conservatism which was so striking a feature of the year 1938. How far this will go in 1939, whether investors will really take con-

### In the Outlook



Harrie & Ewing

—a message on the state of the nation, a budget, a defense program, perhaps a sign on what the last election meant to its most interested poll-watcher. Politics crowds into the foreground of the business outlook as the legislative season opens in Washington next week.

Year  
Age  
85.3

19.2  
67,230  
\$2,128  
\$6,841  
2,085  
3,493  
1,535

60  
40  
\$4,977  
\$6,681

150.1  
\$39.90  
\$13.75  
0.125¢  
\$0.96  
3.20¢  
8.40¢  
\$0.877  
14.85¢

5.77%  
2.68%  
1.26%  
1.00%  
1.00%  
231

4,423  
1,480  
4,617  
1,536  
9,177  
2,885  
1,007  
2,658

104.0  
31.3  
58.1  
85.1  
1,619  
quest.

### Mail-Order Prices Down

BOTH THE LEADING mail-order houses issued their midwinter sales flyers this week, showing price reductions. Sears, Roebuck & Co. cut an average of 11.92% from its fall and winter catalogue prices, and Montgomery Ward & Co. said its reductions ranged from 5% in some staples to 20% or more on women's dresses, and that its new prices were 5 to 10% below those in its flyer last winter. Sears' flyer prices moved down 6.15% from flyer prices of last winter.

fidence from it, and whether the clashes in anticipation of 1940 will be harmful to business, are still uncertain. Again, the funds available in the banking system are larger than a year ago, and government action has turned sharply away from deflation, but it is not assured that these funds can take fire in a further strong and healthy forward move or that the federal reserve authorities will not reverse their policy again this year. Another favorable influence is the gradual reduction in costs which is in progress in many industries, but whether this is moving fast enough to give a significant stimulus to output and investment is very doubtful. If one merely thinks of the added possibilities of war scares and declines in foreign currencies, it can be seen that a prediction for the last half of 1939 would be premature.

## Business in the New Congress

**Most New Deal laws may be revamped. Roosevelt will stress armament issue. Taxes, farm laws, WPA, labor, social security, etc., will be considered.**

WASHINGTON (*Business Week Bureau*)—Some revamping of practically all legislation that the New Deal has put on the books in the last six years is in prospect with the assembly of Congress next week. Some that the Administration wants, some that the Administration doesn't want; no clear-cut swing one way or the other.

To keep the New Deal out in front, the President will make all the capital he can out of keeping himself in line for a third term, whether or not that is his intention. To maintain his leadership and advance centralization of authority in Washington he will loud-pedal national defense—a theme that is susceptible to many variations. The President will make the most of it in his message Wednesday to the new Congress on the state of the Union. Neither that message, however, nor the "paper" budget for the fiscal year 1939-40, will reveal the extent to which armaments may be adapted to meet political exigencies that will confront the Administration between January and June. Incidentally, the session coming up will be a long one.

Large authorizations for the army,

navy, and aviation will be voted by Congress. But in the process the Administration's policies on armament and neutrality will be subjected to searching inquiry, with the prospect that Congress will not cede the full discretion that the President desires under the neutrality law. Actual expenditure for armament within the space of the coming year will not be as large as popularly supposed, and government loans to Latin American countries for this purpose or for trade development to counter the activity of the totalitarian states will meet strong opposition in Congress. Any large volume of indirect loans also will start a backfire in Congress to a degree that may embarrass the Administration politically. The Administration's course, in the first instance, will depend to some extent on the upshot of the Lima conference.

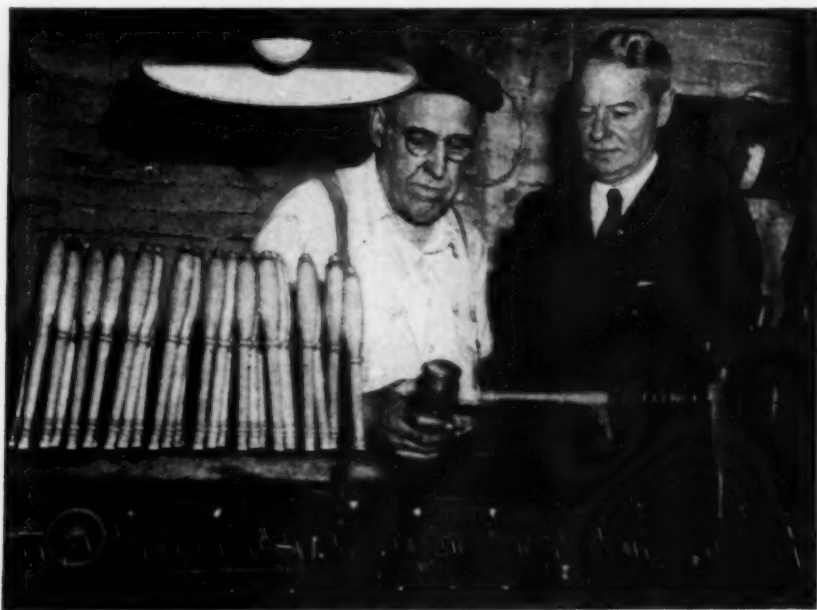
Closely linked with foreign policy is the refugee problem and it is already obvious that the vast majority of Congressmen have learned that sponsoring or even voting for relaxation of immigration quotas on persecuted peoples involves a heavy political risk that they don't propose to take.

### How Tax Outlook Shapes Up

Any attempt to arrive at a budget for the coming year is almost absurd, as practically all of the major controversial issues that Congress will tackle involve either revenue or expenditure. For that reason the tax bill will be near the end of the line of legislation. The President will hold out for the present remnant of the undistributed profits tax, but it's certain now that the spread will be further narrowed or possibly eliminated altogether. It is also anticipated that the President will lose a fight for making the capital gains tax more drastic.

Resented both by farmers and consumers, processing taxes to offset part of the cost of the farm program will be kicked in the face. Assuming that more money, over and above what the present rise in business conditions may produce, must come from somewhere, it is regarded as likely now that Congress can be persuaded to nick incomes between \$10,000 and \$50,000. Little is heard about slapping on heavier taxes above or below that range. Incentive taxation, considered as a means of encouraging profit-sharing in industry, has been generally repudiated on that ground; but now its sponsors will stress its merits as an inducement to make plant improvements and extensions.

### The New House Will Come to Order



—And stay in order, if the supply of gavels turned out by Capitol Machinist E. S. Kenyon and inspected by Capitol Architect David Lynn is any indication of Speaker Bankhead's intention to keep a firm hand on affairs.

Wide World

## Harry Hopkins—"Big Business Man"

WASHINGTON (*Business Week Bureau*)—"Pick the man in the government who has most of the attributes of a really big business man and your man will be Harry Hopkins, the new Secretary of Commerce." This is the sort of propaganda that is being used to build Hopkins up, but it's a fact that Hopkins has got what it takes to sell himself to business men. He has the kind of alert, aggressive, and daring mind that succeeds in business. His is a kindred spirit with Baruch, John Hertz, and other men who are willing to bet on their own judgment. Hopkins is tremendously interested in vigorous, risk-taking business but he doesn't kowtow to big business because he knows that a lot of fortunes are not made by ability but by fortuitous circumstances.

Something is bound to happen in the Commerce Department with Hopkins in the job. That's why Roosevelt put him there. He will try to make friends with business executives who have earned their place, men who realize that there must be a certain amount of government in business these days but who are still willing to take chances on the progress of industry and invention. Hopkins' aim is to put the Commerce Department in tune with the needs of business and the requirements of government. Think of the Commerce Department as a sort of British Board of Trade or as the kind of organization that

Funk has developed in Germany and you won't be far off the track of Hopkins' line of action. Under him, the department will become an "outlet" for the Temporary National Economic Committee, whose findings will



International

point to remedies that are expected to bear fruit not only in legislation but in the voluntary adjustments of business enterprise to economic conditions. It's a practically sure bet that the projected Bureau of Industrial Economics that will pick up where the TNEC leaves off will become an arm of the Department of Commerce and an agency that will far eclipse in importance and influence Hoover's Bureau of

Foreign and Domestic Commerce in its palmiest days.

Hopkins is high-strung, works hard, plays hard—the horses, bridge, poker. He has a nasty temper but engenders steadfast loyalty in friends and subordinates. He's something of a hunch player, arriving at decision by a sense of feel rather than by conscious analysis of facts. This is a weakness as well as an asset but he has held his own in an Administration that, like business, has had its ups and downs. He disposes of a tremendous amount of work quickly. He lives with a 'phone, takes few notes, and writes few letters.

Hopkins is a Phi Beta and is no dullard in economics. He believes that in depression business can't be expected to carry the whole load, but he also believes that without investment of private funds in a rising economy there can be no permanent recovery. He believes the true function of government intervention in business is simply to stimulate competition.

Hopkins has no patience with red tape. He likes a flexible organization and will saw off his job in the Commerce Department by farming it out to as many staff men as he thinks are capable. Hopkins' personal and political troubles have tried his soul. He has entirely recovered from his breakdown in health a year ago but since then he has been under terrific pressure and the President has turned to him more and more.

There's no real enthusiasm for it even on that ground and the Treasury, anticipating its potentially damaging effect on revenues, almost certainly will succeed in blocking any headway in Congress. The Treasury is expected to recommend a ban on tax-free securities—federal, state, municipal—coupled with taxation of all incomes from government sources. Taxation of public salaries by statute has a bare chance. Congress may put elimination of tax-exempt securities up for ratification as a Constitutional amendment.

The attack on the Administration's farm program probably will be turned aside. Republicans, who now have a majority of all House seats from the western Corn and Wheat Belts, probably will fail of agreement on domestic allotment, cost-of-production, or any other substitute for AAA crop control.

As predicted (*BW—Jul 16 '38, p. 16*) last June's appropriation of \$1,365,000,000, designed to carry the Works Progress Administration through February, will be exhausted early in that month and at least \$700,000,000 more will be needed immediately to cover relief until the end of the fiscal year, June 30. A Congressional

investigation of Hopkins' administration of relief is certain to result in a strong demand for amendment of the Corrupt Practices Act, and this demand is very likely to be satisfied. Any drastic alteration in the present method of handling relief expenditures doesn't appear probable, however. Appointment of an army officer to take over Hopkins' job will have an antiseptic effect. A soldier was put in to straighten out the Resettlement Administration when Rex Tugwell shook the dust of Washington from his feet a couple of years ago. Col. F. C. Harrington, WPA's chief engineer, is just as much of a New Dealer as Hopkins or Aubrey Williams, deputy administrator who talked himself out of the job as Hopkins' successor, but Harrington wears a uniform.

### USHA's Funds to Be Increased

No more money for Sec. Ickes' Public Works Administration is in the cards this session, as its present \$1,800,000,000 public works program will not run itself out until 1940. The United States Housing Authority's present \$800,000,000 authorization will probably be raised by several hundred millions, but it is money

that lasts a long time in the spending.

The new limits of the Social Security program, which is certain to be enlarged, are no subject for prophecy, but Congress undoubtedly will have the support of the rank and file of business and labor to cut the government in for a third of the expense of the old age pension system as recommended by the Social Security Advisory Council. Putting the money beyond the Treasury's reach also will find high favor.

On government reorganization the Administration will fight hard to get what it can, but the opposition now is so strong that Sen. Wheeler and other insurgents hope to put through a bill that would require the assent of Congress to any shifts made by the President.

Some clarification of the wage-hour law is probable, as Administrator Andrews says himself that some amendments would simplify administration.

The American Federation of Labor is practically certain to win support for craft-union consideration as "appropriate bargaining units" and otherwise to remove from the Wagner act any room for discrimination by the Labor Board in

favor of industrial unions. After several years of duress, management also can expect some relief from provisions of the law which leave it standing between two fires.

Any banking legislation is doubtful. Congress shuns the subject instinctively and lack of accord in the Administration does not point to a well-supported program. It's likely, however, that an attempt will be made to put a tight rein on bank holding companies.

#### Anti-Trust Amendments Sought

Anti-trust legislation will be confined to several amendments of the present law, the principal effect of which would be to fasten responsibility and punishment for violation of the law on corporation officials. It is probable also that the patent law will be amended to prevent use of group ownership of patents in restraint of trade.

As for Rep. Patman's widely heralded bill to impose a federal "death sentence" tax on chain stores, ranging up to a maximum of \$50,000 a store, that has been knocked in the head by the disclosures of Rep. Patman's relations with McKesson & Robbins (BW—Dec 24 '38, p. 30).

Any measure for railroad rehabilitation that reaches down to the fundamental cause of their condition is not likely to develop out of the strained relationship between the White House and Chairman Wheeler of the Senate Interstate Commerce Committee. It's expected that the Administration will attempt to take the ball away from both the Montana Senator and the Interstate Commerce Commission by shifting railroad reorganization to the Securities and Exchange Commission.

#### Aim at Greater Oil Control

Lord High Oil Administrator Ickes will take advantage of the expiration of the present interstate compact and of the Connally hot oil law to gain a greater measure of control over the industry. It's doubtful whether he will succeed, although the Connally law outlawing interstate shipment of oil produced in violation of state proration laws will be extended and a move will also be made to include refining operations in the brakes imposed on production by the interstate compact.

Nothing is likely to happen to the Tennessee Valley Authority beyond a possible reduction in its appropriation.

Much loud talk in the Senate will surround the President's appointment of new members to his cabinet, which at last is undergoing an overhaul. The Senate tacitly admits the President's right to select his own advisers. There is no doubt that Hopkins will be confirmed as Secretary of Commerce or that Frank Murphy of Michigan will, if appointed, be confirmed as Attorney-General, although his name would almost certainly be rejected for the Supreme Court.



On Dec. 19, Carl R. Gray, of the Union Pacific, and George M. Harrison, of Railway Labor Executives Association, called on the President. Five days later, the six-man Rail Rehabilitation Committee, of which they are members, handed Mr. Roosevelt their report—as a Christmas problem.

## Rail Report Has Labor Backing

New prescription for carriers' ills has familiar ingredients but is likely to get more attention in Congress than last one did.

IN THE SPRING OF LAST YEAR, the country's railroads were faced with a financial emergency. President Roosevelt appointed a special three-man committee, headed by Interstate Commerce Commissioner Splawn, and that committee issued a report which the President promptly turned over to Congress (BW—Apr 16 '38, p. 13). The report was still in Congress when the legislators packed their bags and went home (BW—Jun 25 '38, p. 15).

This week, with Congress about to convene, President Roosevelt had another report in his hands. This time it comes from a six-man committee, which he appointed in September when the railroads were faced again by an emergency after they failed in their fight for a 15% wage reduction.

The new report is not very different from that made by the Splawn Committee. It, too, suggests that the Reconstruction Finance Corp. loosen up in making loans to the carriers, that a special federal court be established to speed railroad reorganizations.

Like most previous special reports on the railroads, it is essentially a compendium of general principles. To Congress is left the exceedingly difficult job

of working out the details. In one respect, however, this report is more promising: it is the combined effort of three railroad executives and three labor representatives.

The fact that labor and management formulated the broad general principles augurs mildly for some action by Congress. The Splawn proposals last year met death by labor's opposition to any legislation at the time, because the carriers were demanding a wage cut. But now that there's general agreement, if Congress can work these principles down to acceptable details, some legislation may result.

#### Costs May Be Affected

Shippers, however, can expect freight costs to go up, if some of the recommendations go through. Modification of the long-and-short haul clause would tend to boost rates, and giving the Interstate Commerce Commission authority over truck and water way tariffs might result in general advances in all freight schedules whenever the commission decided to raise rail rates.

One proposal sounds particularly well on paper. The committee suggests set-

ing up a Transportation Board to investigate and report to Congress on the relative economy and fitness of all forms of transportation. Ultimately, this board would be put in charge of all transport development and expansion programs. Object: to see that transportation develops along sound economic lines. In this respect, the board would succeed the ICC.

In part, this board's job would be to approve railroad consolidation plans; and in this function, it might step on labor's toes. So when the proposal comes up for Congressional consideration, it won't have easy going. Labor and management can agree readily enough on broad, general principles, but accord on specific legislation may be less easily attainable. That's why so many rail reports have died in Congress in the past.

### Passenger Fare "Postalization"?

The report did not refer to passenger rates—specifically. But former New York State Senator John A. Hastings volunteered a proposal which offset this omission and sent railroadmen to their book-cases for a copy of More's "Utopia." Hastings, in a full-page advertisement in New York papers, demands "postalization" of railroad passenger fares. He reasons: You can send a letter to Los Angeles for the same price as to Chicago. Why not passengers, too?—at the fixed rate of \$1 anywhere in the United States, but with small extra charges in cases of special delivery, such as Pullman berths, speed trains, or parlor car seats. Congress is not expected to take the Hastings plan seriously.

## British Anti-German Trade Drive

**Business begins reorganizing to meet Nazi competition, especially in southeastern Europe. Machine tool manufacturers are among first to act.**

PRIVATE BUSINESS IN BRITAIN is beginning to discuss seriously the need for organizing on an industry-wide basis in order to meet the competition of the totalitarian states in foreign markets. The immediate threat is German rivalry in southeastern Europe, but manufacturers admit that they need to pep up their export drives everywhere if they are to maintain their share of world business.

The machine tool manufacturers are one of the first groups to organize under the new pressure. When the rearmament program started in England, the machine tool industry was one of the least organized in the country. It didn't have even a trade association.

In order to meet the government's requirements for speedy delivery of tools for the armament industries, and to meet similar demands from foreign buyers, six of the leading machine tool manufacturers formed the Machine Tool Manufacturers' Association. Object of the association is to encourage specialization among its members and to act as sales agent for their products. Government orders are already negotiated on a group basis, then allocated to individual members. Foreign business is being solicited on the

same scheme, though no big export sales campaign has yet been developed.

This move by the machine tool manufacturers is encouraged by the government, through the Department of Overseas Trade (which corresponds with our Bureau of Foreign and Domestic Commerce). D. O. T. officials have been touring the country for nearly 18 months now, urging industries to get together in their trade associations to (1) bargain more effectively with their rivals in other countries for a division of international markets, and (2) prepare to subsidize exports (when necessary) by taxing home consumers in order to build up a subsidy fund from within the industry. This is the method practiced by the Germans.

### Organizing for Foreign Trade

Some of the more aggressive leaders in a number of British manufacturing lines are advocating far more radical schemes to meet Germany's centralized and subsidized export competition.

One suggestion is the formation of great foreign trade associations by groups of industries which both buy and sell abroad. The members of the group

## Chicago Digs In—At Last



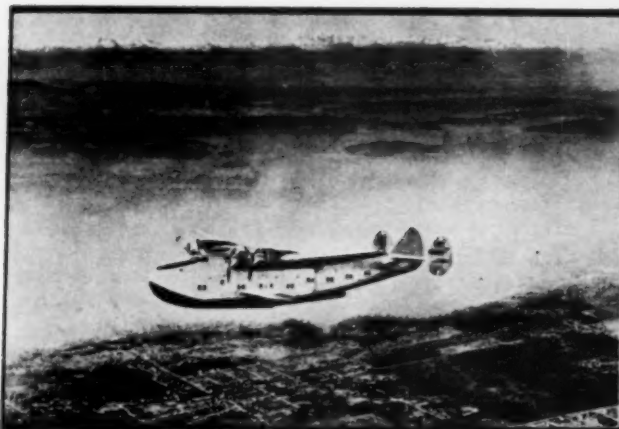
Acme

Wide World

Biggest Christmas present to "the largest city in the world without a subway" was the start of actual construction on the first of the lines (BW—Dec17'38,p33). Ground-breaking ceremonies Dec. 17 on North State Street at Chicago Avenue attracted a record crowd of

often-disappointed Chicagoans to watch the unbelievable spectacle of Mayor Edward J. Kelly and Secretary of the Interior Harold L. Ickes collaborating on a pneumatic drill. Five days later, the first caisson was already sunk to a depth of 45 feet.

## Giant Air Boat Has Plenty of Room to Fly Around In



Airplanes are getting so big they're outgrowing old aviation terms. In talking about Pan American Airways' new 74-passenger Boeing-built Clipper, shown in flight at the left, you can hardly refer to what you see at



the right as a "cockpit." It still houses pilots (who fly the ship from armchairs) but there's also ample space for a navigator, radio officer, master (or watch officer), flight engineer. On this scale it's a "Control Room."

who make huge purchases of raw materials abroad would refuse to buy except when they might in return sell British goods. This would give the British some of the bargaining power now enjoyed by the Germans.

Another group would go one step further. It would use Britain's highly organized banking, shipping, and distribution facilities to buy and sell products of Finland (for example), which is less well organized to handle its own export sales. In return, the British would expect Finland to balance this trade with imports through Britain, though there would be none of the insistence on balanced bilateral trade as is the case with Germany. The British theory would be to provide business for British ships, banks, and distributors, and hope that any increase in trade with under-developed countries such as Finland would help to revive world trade in general.

### Coal Cartel Planned

Following the move by the machine tool industry, Britain expects the next significant development to be in the coal trade where mine owners have practically completed negotiations for an international coal cartel which will divide the principal world markets among the big exporting countries in the hope that this will stop price-cutting.

In spite of all the talk, there is little confidence among British business leaders that the Chamberlain government will do anything drastic in the near future which might offend Hitler. Nevertheless, British business is gradually reorganizing to meet the German competition, and its program is likely to be stiffer and more effective than the political policies of the British government have been during the last year.

## LABOR AND MANAGEMENT

### "Sheboygan Idea" for Jobless

Mayor of Wisconsin city devises a plan for dealing with permanent unemployment and for stopping flight of industries. State may cooperate.

THIS WEEK THE MAYOR of Sheboygan, Wis., walked into the office of Governor-elect Julius P. Heil, laid down a formula for state-and-community industrial reorganization, and set in motion a campaign which may do much not only for Sheboygan but for other towns and cities. The mayor, Willard M. Sonnenburg, has worked out in the "Sheboygan idea" a method of dealing with his town's problem of permanent unemployment.

The history of Sheboygan in recent years is much like that of scores of other communities. It has 40,000 people, and quite a bit of native industry, a good part of which is wood-working. There is also a considerable amount of cheese-making and marketing, and container manufacture. Nearby in a separate village is the big Kohler plant which makes kitchen and bathroom equipment. But Kohler is not a part of the local unemployment problem.

From 1923 to date, Sheboygan has lost 47 business establishments, through bankruptcy, moves to other fields, or natural conditions such as the gradual using-up of available nearby timber in

furniture manufacture. The industries which disappeared left some 2,400 workers without jobs. As other businesses reduced their forces and nothing much was done to get new industries in to replace the old, the cost of carrying the unemployed has grown steadily, like this:

Relief Cost to City	Federal Relief Aid
1926....\$ 19,298	None
1930.... 19,847	"
1931.... 33,905	"
1932.... 160,145	\$ 70,168
1933.... 151,259	187,660
1934.... 138,711	336,272
1935.... 224,351	94,455 (by WPA)
1936.... 319,307	(WPA total unavailable)
1937.... 327,969	" " "
1938.... 425,000	" " "

The nine-year experience of Sheboygan shows that about \$550 is spent each year to maintain a family on relief, and that the problem has been perpetuated by "relief without reconstruction" policies. In 1928 the tax rate on real property was \$31.38, of which 45¢ went for relief. In 1937 the rate was \$37.46, with \$9.04 going for relief. Rigid economies have been practiced in all possible ways but relief is at a subsistence level and can't be cut further.

1, 1938



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Burroughs Low-Cost Payroll Accounting Machine



Burroughs Electric Adding Calculator



Burroughs Labor Accounting and Statistical Machine



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**Install** **A.P.W.**  
**Onliwon Towels and Tissue**  
 COMPLETE WASHROOM SERVICE  
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**WELCOME**  
**TO ST. LOUIS**  
 Welcome to friendly service...  
 fine food and drink, served in  
 the hospitable atmosphere of  
**HOTEL**  
**Mayfair**  
 9th and ST. CHARLES  
 DOWNTOWN AT YOUR DOORSTEP  
 Over 50% of all rooms \$3.50 or  
 less single \$5.00 or less double

And about one-tenth of total tax collections are delinquent because the 85% home-owning Sheboyganites can't pay up.

With all this in mind, Mayor Sonnenburg got the city officials, merchants, and manufacturers together to take action. Their first move was to set up a peace board (*BW—Sep 3'38, p.35*) to handle labor problems. With a basis of understanding established, they worked out the "Sheboygan Idea" of reconstruction, thus:

1. A New Industries Council was established, to survey possibilities of pooling marketing and warehousing efforts for Sheboygan products in the East, of expanding the present local industries, of developing new lines of business, of adapting ideas used effectively in other localities, and of making attractive offers to outside business.

2. The WPA has been asked to make a complete survey to determine the actual extent of unemployment in Sheboygan, the percentage of seasonal unemployment, what new products would

best fit in the industrial whole, what plant space is available for new industry, what the local vocational school could do to train people for new jobs.

3. The experience of England in setting up "Trading Estates," by which new industries are induced to enter depressed areas through concessions or outright financial aid, is being studied critically. It is possible that loans of plant space and other facilities could be offered on a "pay later" arrangement.

4. The mayor has taken the idea to the new governor, hoping that the state can be interested in assisting communities like Sheboygan to develop the new-industries idea.

In brief, the Sheboygan Idea is best expressed in Mayor Sonnenburg's own words, as he explained it to *BUSINESS WEEK*: "Our unemployment varies from 3,000 to 4,000, and of that number 2,000 are the 'permanent' load. We must do something about the problem, not only because it is eating its way into tax rolls but because its constant pressure is breaking down the morale of our people. Facing it as a practical business problem, if we are spending \$425,000 a year for relief, and can save a considerable portion of that by even starting our own industries, why shouldn't we do it? Only the creation of more wealth will reduce this burden, and we feel that in Sheboygan we can't wait any longer to get started on the job."

## LABOR ANGLES

### Peace in Pieces

RANK-AND-FILE MOVES for unity between A.F.L. and C.I.O. sections continue to spread. With joint councils established in two California areas (*BW—Dec 24'38, p.30*), the idea of "local cooperation despite what John Lewis and Bill Green call each other" is spreading. C.I.O. directors in North Carolina have invited A.F.L. and railroad unions to discard "all malice, hatred, distrust, and enmity" in favor of joint action; locals in Detroit, Arkansas, and Maryland are fraternizing; New York intramural scrapping has been practically non-existent for months.

### Lessening the Strain

"TO LESSEN THE FINANCIAL strain on its direct employees during periods when sickness, non-occupational accident, or certain other causes of unavoidable absence interrupt regular income, the company will voluntarily contribute in lieu thereof the benefit payments indicated in the schedule below." Thus Phillips Petroleum Co. announces in *Phil-neus*, its employee magazine, the inauguration on Jan. 1 of a scale of benefits based on length of employee's service. Yearly benefits range from one week at half pay up to eight weeks at full pay.

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*BUSINESS WEEK REPORTS TO  
EXECUTIVES ON—*

## 1939—Television Year

Ending years of rumor and premature conjecture, television's birth was officially scheduled for the year 1939, when David Sarnoff, president of the Radio Corporation of America, announced two months ago that home receiving sets would be put on sale by April and that the National Broadcasting Co., RCA's subsidiary, would begin a regular television broadcasting service when the New York World's Fair opens April 30, 1939.

But unlike Minerva, television will not spring full-grown from its father's head. Service in 1939 seems probable only for New York City and Los Angeles. It will be another year until there will be television shows in any of the other principal cities and until they provide a market for the sets now being readied by a half dozen manufacturers. And it will be at least five years—possibly ten—until television shows pay their way.

During all this period of practical development, an understanding of television's basic problems is important not only to those businesses like advertising, which sees in television a new tool of great potential utility, but to the whole host of industries that will supply television's needs—money, materials, and talent. It is the purpose of this report to analyze both the problems and the needs of the new television industry in terms of the opportunities which it presents for business executives—now, in "1939—Television Year," and for decades to come.

In the preparation of this report BUSINESS WEEK has had the valued assistance of Donald G. Fink, managing editor of ELECTRONICS, a McGraw-Hill publication which for the past eight years has followed intensively the technical developments in the field.



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OF ALL the technological advances now on the horizon, none has caught the interest of American business men more than the imminence of a public television service. The reasons are not hard to find. Here is the beginning of a new industry with unplumbed potentialities for nearly every line of business endeavor. In the immediate future, it will open a new market for the sale of every component which goes into the making of television transmitters and receivers—and that means all the materials used by the present radio industry in even greater quantity and variety. More remotely, it offers a new advertising medium which may conceivably be the most effective ever devised. If its promise as a seller of goods is fulfilled, it may multiply the rates of production and consumption in every branch of industry.

Even if its potentialities as an advertising medium are discounted, television has a personal appeal which few can escape. In the minds of everyone are the questions: When can I have television in my home? How much will it cost? What will the programs offer? How good are the pictures? What will its effect be on radio? On the movies? Is television a good investment?

America expects a great deal of television but knows very little about it—two circumstances that can be blamed on premature and often ill-advised publicity, which consistently has been more dramatic than factual. As a consequence, few people realize that the only market for television now contemplated by the manufacturers is the New York City area (and possibly Los Angeles), that it may be a year or more before regular program service is instituted in any other city. Again, few realize that there are only 96 areas in the country where population is sufficiently dense to support the service, under any conditions now imaginable. Perhaps even fewer people realize that many television concerns are resigned to the

fact that they will make very little money—at least in the first year. Most new industries start small, and television is definitely no exception—a circumstance that will stand in sharp contrast to popular expectations.

### How Good Is Television?

TECHNICALLY, television is an achievement of the highest magnitude. Under average conditions the pictures received in favorably situated homes are steady, clear, reasonably bright, and contain sufficient detail for the presentation of nearly any type of subject. In the words of one radio network executive: "The technical problem of television, so far as I can see, can be considered solved. If the programs are half as good as the pictures, we'll have little to worry about except meeting the demand."

Thus, in the opinion of those who know the field, it appears that the system is amply good enough to offer the public. Yet it cannot be forgotten, as these men warn in the same breath, that there are limitations, especially geographical limitations, from which at present there is no visible avenue of escape. But before outlining these physical limitations, one other aspect of the television problem—the artistic excellence or entertainment value of the medium—must be considered. And here, present performance falls far short of the standards of technical perfection which have been attained. Perhaps that is necessarily so, for there are no absolutes in the entertainment equation; the artistic attainments of television will always depend solely upon the imagination and financial resources of the television broadcasters, and experience alone can accomplish needed improvement.

It seems certain that an entirely new entertainment method ("art form" to the more effete) must be developed for the purpose. Television, at first, will be far too weak to compete with the motion pictures—if indeed

### This is Television Today



No television image looks nearly so good as a close-up of a pretty girl. The model is shown (left) as she actually looked in the studio and (right) as she looked on the screen of a receiver in nearly identical poses. Principal differences in the received image are a slight

loss of detail and a certain unevenness of background shading, both of which will be improved as television grows older. Line structure of the received image, not visible here because of photographic reduction in size, is evident in the full-size picture on page 29.

ordinary movie fare will ever prove suitable for every-night consumption in the home. Nor will it ever sound the death knell of the legitimate stage—as some melodramatists writing for the Sunday supplements have prophesied. Finally, it will not compete with conventional sound broadcasting, because television can reach only a small audience compared with sound radio and serve that audience adequately only through a portion of the time which is occupied by regular radio broadcasts.

Whether the necessary entertainment level can be achieved easily or only at great cost, it is certain that television cannot succeed unless the programs command the attention and interest of the viewing public. It is because of this factor that television can be set down today as a grand gamble. When and if the broadcasters hit the lucky formula—television will be here to stay.

### How Many People Can Television Serve?

**E**CONOMIC and technical—or geographical—considerations exercise the most serious restraints on television.

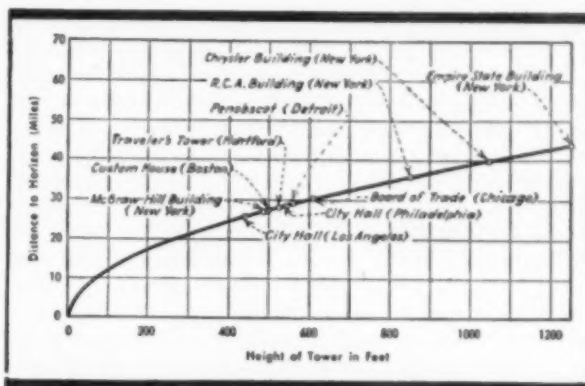
First, there's that item of cost, as applied to both transmitters and receivers. A transmitter costs \$60,000 at a minimum, but this figure does not include installation, studio construction, or purchase of site. A transmitter which approaches the maximum in quality, such as that being installed by the Columbia Broadcasting System in New York City, costs \$500,000 and another \$150,000 or more to install, complete with all accessories. Thus the broadcaster can be out of pocket well over a half million dollars before he takes the air—and with no assurance of any ultimate return. As for receivers they cost from \$100 to \$1,000. The corresponding quality in sound receivers would cost roughly \$25 to \$250. Will the public buy? Time alone can answer that.

Then there are technical or geographical limitations—perhaps the most serious of all. The range of a transmitter is limited by the height of the transmitting antenna and the character of the surrounding terrain. Except under extremely favorable conditions, fifty miles is the operating limit for an antenna a quarter of a mile high; an antenna 400 ft. high—perhaps the highest to be expected in many of the smaller cities—can serve with an adequate signal only receivers within 25 or 30 miles.

**A**GAIN, TELEVISION cannot be syndicated simultaneously to many stations, as in network sound broadcasting. The reason is that ordinary telephone lines cannot carry a television signal without distorting it beyond recognition. Newly-developed telephone cable capable of handling television signals—the widely heralded coaxial "pipe"—costs so much and has such great potential value in ordinary telephone work that it cannot be expected that these lines will be installed, or made available for television when installed, until a very pressing demand for them arises. One cable suitable for television transmission has been constructed between Philadelphia and New York. This line is still in development and has not yet made available for telephone service.

These two circumstances—the limited range of each station and the virtual impossibility of connecting stations in networks—have in turn two very important consequences: (1) It is economically feasible to serve only the densely populated regions in urban areas; small cities and

### You've Got to Get Up to Get Out—



—That's what this trick chart boils down to. Unlike the longer waves used in sound broadcasting, the ultra-short ones that carry television do not bend to follow the curvature of the earth. Consequently the horizon is about the limit of the television antenna's transmitting range. And the higher you get, the farther the horizon. The chart brings out this relationship up to the height of the Empire State Building (world's tallest) in New York City, from which NBC puts its television programs on the air. Among the other top spots shown for seven cities is New York's Chrysler Tower where CBS's antenna is going up.

rural regions have little prospect of television service.

(2) Each station must depend upon its own resources for programs or must use motion picture film. Programs other than film must be devised, cast, rehearsed, and produced individually by each station. The program cost is thereby multiplied enormously.

A technical limitation of somewhat less pressing nature is found in the fact that the number of stations which may operate concurrently in any one area of 100 miles radius is limited to seven, at least at present. This restriction arises from the fact that there is room in the ether for only this number of channel assignments. (Actually, some 19 channels are available, but only seven are considered technically useful.) Eventually this restriction may be serious. At present, it appears that within any area of 100 miles, the seven channels will more than take care of the demand.

Still another difficulty is the fact that television receivers must be installed with care, especially in regard to the antenna installation. "Ghost images" (see glossary of television terms, page 22) are very common in cities where tall buildings may cause signal reflections. Automobile ignition systems and other sources of static may interfere seriously with the picture reproduction. These latter difficulties are most serious on the outer fringes of the service area.

### The Essence of the Problem

**T**HE cause of all these limitations is rooted in one inevitable necessity: the enormous rate of speed at which information in the picture must be sent over a television system in order to convey a moving image of

sufficient detail to satisfy the observer. An understanding of why and how this problem constitutes the fundamental impasse of the television system, involves a consideration of some elementary facts about pictorial reproduction.

A picture—any picture—consists of many thousands of small areas of light and shade which are so distributed that they reproduce the original scene. Thus, for example, the impression from a halftone engraving used in printing consists of anywhere from 3,000 to 15,000 printed dots per square inch, depending on how fine or coarse the screen is. If such a printed picture is viewed closely the dots are individually evident. The desirable viewing distance is that at which the dots just begin to lose their individuality and a smooth blending of the half tones results. A 60-line screen newspaper halftone engraving measuring 9 by 7 inches contains approximately 200,000 dots, and it has been determined that when viewed at a distance of approximately two feet, this number of dots spread over such an area is suitable for nearly all subjects.

In a television system each of these 200,000 dots must be transferred into an electrical impulse, and the impulses are sent one after the other over the transmission system. It follows that roughly 200,000 impulses must be conveyed in transmitting each picture.

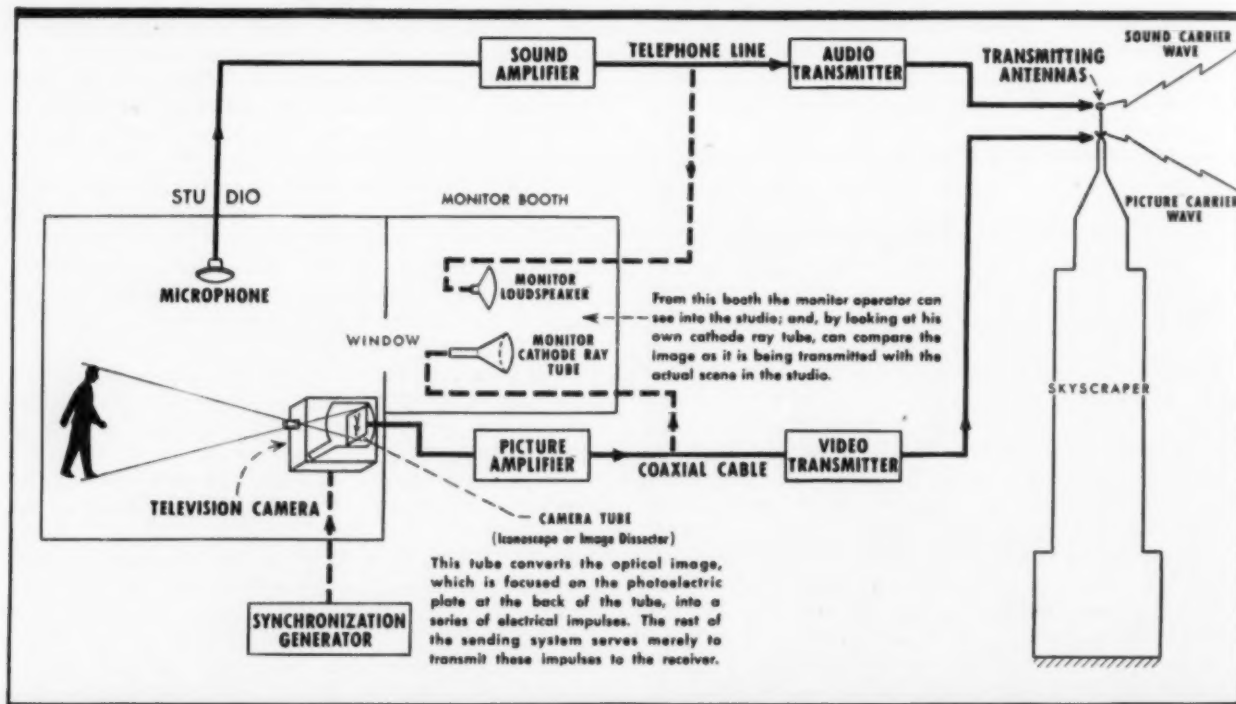
**T**HE remaining question is the speed at which the picture is to be sent. In ordinary wirephoto practice it is sufficient to transmit a picture in 10 minutes. In this

case, the impulses are sent at a rate of 200,000 in 10 minutes or 300 per second. Ordinary communication circuits are capable of operation at this rate of speed.

In television, on the other hand, each picture must be sent in a small fraction of a second, actually 1/30th of a second according to present standards. The necessity of sending the picture in this short time arises from the fact that 30 complete pictures must be sent in one second in order to maintain the impression of continued motion, exactly as in the case of motion picture projection. Now, 200,000 picture impulses, sent in 1/30th of a second, figures out to be 6,000,000 picture impulses per second (as against 300 per second for wirephoto practice). Ordinary communication circuits are decidedly *incapable* of handling information at this phenomenal rate of speed, for telephone circuits, even those employed for carrier telephony, quit when the going gets faster than 30,000 cycles per second.

The result is that extraordinary circuits have had to be devised, and very short wave lengths (from 4 to 10 meters in length as against the 180- to 550-meter waves used in sound broadcasting) have had to be employed. Another result is the fact that each television transmitter occupies a very large slice of the ether spectrum. Actually, the band required for a complete television transmission is 6,000 kilocycles. In contrast, the entire broadcast band, ranging between 1600 kc. and 550 kc. and accommodating hundreds of regular radio stations, is only 1,050 kc. wide. In other words, the whole dial of an ordinary radio receiver

Diagram of a Television System: For Sending—



A television program begins in the studio with the camera for the visual system and the microphone for the sound system, both functioning separately but synchronously. In the camera, the image which is being "viewed" is focused on a photoelectric plate, where it

is scanned by an electron beam and where the picture elements are converted into electrical impulses. These impulses—6,000,000 every second—move through an amplifier and a transmitter over coaxial cables to the antenna atop a skyscraper where they are broadcast.

ing set would be occupied six times over by a single television station.

### Why the Horizon Is the Limit

THE necessity of using ultra-short waves brings with it the limitation of transmitting range. Ultra-short waves do not bend and follow the curvature of the earth, as longer waves do; rather, they pursue a straight line. Consequently, upon transmission from the antenna, these waves travel as far as the eye can see—that is, to the horizon. Thereupon, they glance off the surface of the earth and are lost in the heavens beyond. It is a good working rule (but not without occasional exceptions) that the limiting range of a transmitting station is the distance to the horizon, viewed from the antenna. Consequently, the higher the antenna, the further away the horizon, and the wider the range of coverage. (For mathematicians the relation is a very simple one: The distance to the horizon, in miles, is equal to 1.23 times the square root of the antenna height, in feet. See chart, page 19.)

The moral of this is obvious: If you want to cover a wide area with a television station—and the wider the coverage, the bigger the market—locate it on the highest possible point near the center of the population. Two of the highest spots (it will no doubt interest real estate promoters to know) have already been taken. They are the Empire State Building and the Chrysler Building in New York, taken over by the National Broadcasting

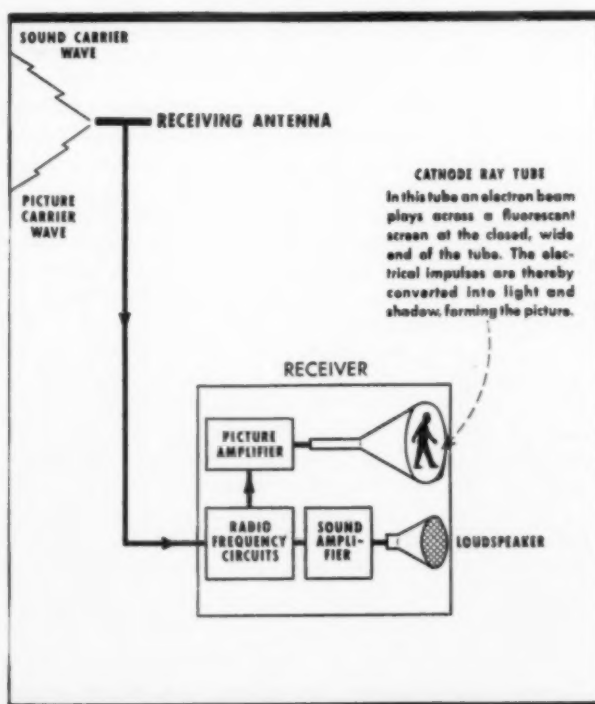
Co. and the Columbia Broadcasting System, respectively.

Skyscrapers are not the only solution, of course. High mountains near important cities, as in the case of Chattanooga or Pittsburgh, may prove quite useful, but high buildings are more apt to exist in centers of population. The only limitation is that most skyscrapers fall far short of the 1,000-foot mark; hence horizons and coverage areas are correspondingly shortened. The chart shows the horizon distance for the tallest building in several of the chief market areas in this country.

There are 96 metropolitan areas in the United States of 100,000 population and over, which is considered to be the minimum population capable of supporting a television service until costs are drastically reduced. If it be assumed that a 400-foot tower is either available or could be built near the center of each of these areas, it follows that a 25-mile radius can be covered in each. The 25-mile circles, surrounding these 96 areas, constitute only 6% of the area of the United States, but within them exists over 50% of the population, and an even greater proportion of the nation's buying power.

A potential market of some 60,000,000 people is there, but it appears that it will be several years before any attempt is made to exploit even a small part of the market. At the present time, all attention is focused on New York City, where the per capita wealth is highest and where the World's Fair will attract many millions of potential television customers from other parts of the country.

### —And Receiving



At the receiver, sight and sound signals are picked up and amplified. They move then through detectors in which the video signal is restored to the form in which it left the camera. In the cathode-ray tube an electron beam traces the picture on the screen.

### How the Modern Television System Works

A TELEVISION program begins in the television camera, which "views" the scene in the studio or through which movie film is run (see chart). The camera is a large box carefully mounted so that it can be swung in all directions to follow the action of the program. The box contains a lens at one end which focuses the scene on a flat plate, mounted in a vacuum within the camera. This plate serves the same purpose as the plate in an ordinary camera—that is, it serves to transfer the image focused upon it into a latent image.

In ordinary photography, the latent image is photochemical in nature and is developed chemically. In television, the latent image is photoelectrical in nature. Actually, the sensitive plate is a mica sheet on which are deposited millions of tiny drops of silver whose surfaces are sensitive to light. When light is focused on these drops by the lens of the camera, they acquire a positive electric charge. The amount of charge acquired by each drop is in direct proportion to the amount of light falling on it. In consequence, the lights and shadows are transformed into a latent image in electric charge.

The electric charge is then removed from the plate, bit by bit, through the agency of an electron beam which scans the plate in much the same way as the eye scans a page of printed matter. The scanning motion is in a series of fine parallel horizontal lines, which are explored from left to right, one after the other\*, in the same manner as each line is read in a column of type.

The electrical "highlights" and shadows of the image

\* Actually the individual lines of the image are sent in interlaced order—that is, the odd-numbered (first, third, fifth, etc.) lines are sent first, and the lines between are blank. The blanks are then filled in with the even-numbered lines (second, fourth, sixth, etc.). The picture area is thus covered twice for each complete picture, a technique necessary to eliminate flicker in the images.

### A Glossary of Television Terms

- AUDIO** (Latin, "I hear")—Pertaining to the transmission of sound.
- BLIZZARD HEAD**—A blonde actress, to studio technicians who have to worry about proper lighting for her hair to avoid flares.
- BROAD**—A general illumination unit used in lighting the set.
- BUSINESS**—Anything in television for which a technical designation is lacking or forgotten by the speaker. Badly overworked.
- CATHODE-RAY TUBE**—Evacuated funnel-shaped tube containing the screen on which the picture is reproduced in the receiver.
- CONTRAST CONTROL**—A knob on the receiver for adjusting the range of brightness between highlights and shadows in a picture.
- COAXIAL CABLE**—Special telephone cable suitable for conveying television signals.
- FOCUSING CONTROL**—A knob on the receiver for bringing the picture into sharpest definition.
- FRAMING CONTROL**—A knob or knobs on the receiver for centering and adjusting the height and width of pictures.
- FRAME**—One complete picture. Thirty of these are shown in one second on a television screen.
- GHOST**—An unwanted image appearing in a television picture as a result of signal reflection.
- GOBO**—A light-deflecting fin used to direct light in the studio and protect the camera lens from glare.
- HOT LIGHT**—A concentrated light used in the studio for emphasizing features and bringing out contours.
- ICONOSCOPE**—A type of television camera tube used by RCA but on which Westinghouse Electric & Mfg. Co. claims patent control under a recent court decision.
- IMAGE DISSECTOR**—A type of camera tube developed by Farnsworth.
- INTERLACING**—A technique of dividing each picture into two sets of lines to eliminate flicker. (See fuller explanation in footnote, page 21.)
- KINESCOPE**—A receiving cathode-ray tube developed by RCA.
- LINE**—A single line across a picture, containing highlights, shadow, and half-tones; 441 lines make a complete picture.
- LIVE TALENT**—Participants in a program picked up directly in the studio, as distinguished from film presentations.
- PANNING**—A horizontal sweep of the camera. (From "panorama".)
- SAWTOOTH**—A wave of electric current or voltage employed in scanning.
- SCANNING**—The action of the electron beam in exploring (in the camera tube) or reproducing (in the cathode-ray tube) the half tones in a picture.
- SCOOPS**—Multiple lighting units in the studio.
- SPOT**—The visible spot of light formed by the impact of the electron beam on the screen as it scans the picture.
- TELECAST**—A television broadcast.
- TELECINE TRANSMISSION**—A movie program.
- TELEVISION**—The transmission and reproduction of transient visual images by radio.
- TILTING**—A vertical sweep of the camera.
- SYNCHRONIZATION**—The process of maintaining synchronism between the scanning motions of the electron beams in the camera tube and the cathode-ray tube in the receiver.
- VIDEO** (Latin, "I see")—Pertaining to the transmission of transient visual images (cf. "audio").
- WINDSHIELD**—A perforated metal cover which fits over the microphone and protects it from drafts caused by the powerful air conditioning system used to remove heat caused by the lights in the studio.
- WOMP**—A sudden surge in the signal strength resulting in a flare-up of light in the picture.

—the electrical charges which exist on each silver drop in each line—are removed by the beam in the form of electric charge impulses and impressed on the transmission circuit. The variations in charge are transmitted by the circuit, which must preserve faithfully all the subtleties of electrical "shading." After arriving at the transmitter, the impulses are impressed on an ultra-short carrier wave and radiated from the antenna.

AT the receiver the process is reversed. First, the ultra-short wave is picked up and amplified by the receiver and then "detected." The detector tube restores the signal to a form which is substantially the same as it was when it left the camera in the studio. This signal controls the image-reproducing tube (cathode-ray tube). This most essential tube is an evacuated, funnel-shaped, glass structure containing a source of electrons which are sprayed, something like water from the nozzle of a hose, on the fluorescent screen that forms the wide end of the funnel. This closed and slightly rounded end of the cathode-ray tube is the screen on which the image actually appears.

When the stream of electrons strikes the screen it creates a spot of light. The brilliance of this spot is controlled by the picture-impulse signal. Furthermore, the direction of the beam is controlled electrically, so that the spot moves across the screen in a series of lines, fluctuating in brilliance as it goes. The motion of the spot causes it to scan the screen surface in exact synchronization with the moving electron beam in the television camera. The moving spot traces out the highlights and shadows of the scene, line by line, until a complete picture is covered. This process consumes 1/30th of a second (see footnote, page 21). Thereupon the spot moves to the top of the screen and traces out another picture in the next 1/30th of a second, and so on.

Some idea of the technical problem present in "photographing" and reproducing the image may be gained from the fact that the electron beam (in the camera and cathode-ray tube) moves across each line in the image at a rate of about  $2\frac{1}{2}$  miles per second, and that it changes in intensity (to recreate the detail of the image) every 1/50th of an inch. The image contains about 400 lines (actually 441 lines are used but roughly 40 of these are not active in forming the visible picture).

The sound accompanying the picture is taken care of by a separate transmitter. A microphone in the studio is moved about to follow the action of the program and is kept out of the view of the camera, in the same way as in the filming of movies. The microphone feeds into amplifiers and then into a separate broadcast transmitter.

At the receiver, the sound signal is amplified, detected, and applied to the loudspeaker. The circuits are so arranged that only one tuning dial (or push-button) is required to tune in both sight and sound. Hence it is impossible to mix the picture from one station with the sound from another.

AN ordinary sound radio set contains three controls: one for station selection, one for volume, and one for tone. The television set has these controls, and a minimum of two others for fixing the brightness of the picture and regulating the contrast of range of light between highlights and shadows. Other subsidiary controls to regulate focus, centering, and the width and

height of pictures are available, but are usually not adjusted after the installation of the receiver.

A very high voltage (judged by ordinary standards) is required to operate the image-reproducing tube—from 1500 to 7000 volts depending on the size of the tube and required brilliance of the picture. Care is taken to protect the user from this voltage, and it need be no more dangerous than the 15,000-volt hazard associated with spark-plugs in an automobile, if the circuit is properly designed.

The cost of the receiver depends primarily on the size of the cathode-ray tube employed. The width of the picture varies from a lower limit of about 2½ inches in the smallest tube to about 10 inches in the largest. Most receivers will contain complete equipment for both sight and sound (this arrangement is considered to be the best engineering practice), but some of the cheaper receivers will be "vision only" units. Although a model of this type will not contain sound equipment, it will be equipped with a frequency-converter circuit which will allow it to be used with an ordinary short-wave sound receiver. This latter system is at best a makeshift, but it offers one solution of reducing the price to the \$100 range without sacrificing too much in the picture-reproducing equipment.

#### The Present Situation—Transmitters and Studios

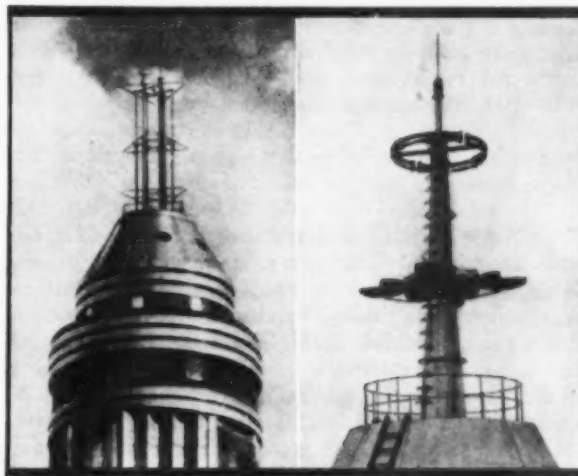
THE best indication of present prospects for television is supplied by the list of transmitter licenses and construction permits issued by the Federal Communications Commission, together with the list of applications now pending before that body (see table, page 27).

There is some confusion concerning the frequencies granted and applied for in this set-up. The explanation goes back to the rules of the FCC as issued in September, 1936. According to these rules, three groups of channels in the ultra-short wave lengths were established: 42,000 to 56,000 kc., 60,000 to 86,000 kc., and frequencies above 110,000 kilocycles. Stations applying for licenses were granted the right to use these frequencies, employing any continuous band of frequencies lying within the stated limits. Licenses issued authorize use of these bands.

However, toward the end of 1937, the FCC revised its allocation of the ultra-short wave lengths. According to this new schedule, definite television channels, each 6,000 kc. in width, were set up as follows: 44,000-50,000 kc.; 50,000-56,000 kc.; 66,000-72,000 kc.; 78,000-84,000 kc.; 84,000-90,000 kc.; 96,000-102,000; and 102,000-108,000 kc. These seven channels constitute those which radio engineers are agreed can be put to use immediately. Accordingly receivers are designed to receive any or all of these channels. However, applications for these channels have not yet been acted upon by the FCC—hence the confusion.

One interesting angle of the frequency assignment problem is the fact that not all of the seven channels are equally desirable, because the higher the frequency, the more difficult it is to build a transmitter of a given efficiency and the less sensitive are the receiving circuits. Thus, the channel from 44,000-50,000 kc. may be looked upon as the prize catch, the channel from 50,000-56,000 next best, that from 66,000-72,000 next, and so on. Actually, there is little preference in the first three channels, but it is nevertheless to the advantage of a station to obtain as low a frequency assignment as possible.

#### Two Years of Progress—and Obsolescence



In June, 1936, when RCA and NBC decided it was time to move television out of the laboratory and subject it to tests under actual broadcasting and receiving conditions, the "pipe-fitter's" antenna (left) on the Empire State Building in New York City was the last word. Soon, it became the bottle-neck of the system, and is being replaced (right) with a "halo" antenna for the sound and "four footballs" for the video system. The new antenna represents a new approach to antenna design and could accommodate ten simultaneous television transmissions. But in television, today's "last word" is often rapidly outmoded.

The file of applications pending tells an interesting story of the fight for prize assignments. In New York City, the National Broadcasting Co. has applied for the lowest channel, 44,000-50,000 kc., and is in fact using this channel under the blanket authority given by the present issued license for its experimental transmissions. The Columbia Broadcasting System, second on the scene, has applied for the next channel, 50,000-56,000 kc. and has used this channel for experimental transmission. The DuMont Laboratories, third in the field in the New York area, has a construction permit (required before the station may be built), but has not yet re-applied for a definite assignment. The General Electric applications for Bridgeport and Schenectady call for a third channel, 66,000 to 72,000 kc. Since the Bridgeport location is within the interference radius of New York, it is apparent that the scramble for frequencies has started—at least in a small way—and the task of the FCC in making the final assignments is not an enviable one.

The record shows stations (either licensed, under construction, or definitely in prospect when authorized) in the following cities: New York City, Camden, N. J., Passaic, N. J., Albany, N. Y., Schenectady, N. Y., Bridgeport, Conn., Boston, Philadelphia, Springfield (Philadelphia), Pa., Milwaukee, Kansas City, Iowa City, Chicago, Los Angeles, and San Francisco.

This is an impressive list, but it must be carefully interpreted. Only three stations are definitely set up on the basis of an announced public program service made up

of "live talent" as well as film presentations: two in New York and one in Los Angeles.

Four stations—Camden, Philadelphia, Chicago, and Bridgeport—will be used, for the present at least, primarily for testing and developing television receivers, since these four stations are located at or near receiver manufacturing plants. The others have made no announcement of a public service, or at best have announced that film transmissions will be made, when authorized.

ONE station, the Don Lee station in Los Angeles, has a regular "live" and film program service at present, six days a week—one hour every evening (2½ hours on Wednesdays and Fridays) and one mid-day hour on Wednesdays. The New York NBC station has announced that it will go on the air, coincident with the opening of the New York World's Fair (scheduled April 30, 1939) with "live" and film program two nights a week, one hour per night. Film transmissions during the day are also planned from this station for the purpose of allowing demonstrations by dealers. No official announcement has been made by the Columbia Broadcasting System, other than that their station is at present nearing completion and will be put in service at the earliest possible opportunity.

All of the licenses now issued are of the "experimental" classification, and do not allow the sale of broadcast time for any purpose, advertising or otherwise. If advertisers storm the gates of the stations (highly unlikely except possibly those seeking publicity through other channels), they must be turned down until the FCC issues a commercial form of license. And no indication of such action has yet come from Washington.

Most of the stations in the roster have been constructed by the engineering staff of the organization in question. The only sale recorded to date is that by the RCA Manufacturing Company to the Columbia Broadcasting System, for the Chrysler Building installation. But other sales may well be in prospect.

TELEVISION transmitters have been put on the market by RCA Manufacturing Co. A transmitter offered at \$60,000 consists of a video (picture) transmitter of one kilowatt peak power, a sound transmitter of four kilowatts peak power, a synchronization generator, and one camera studio chain consisting of all equipment that is necessary to connect the camera to the transmitter.

The price does not include installation, test equipment, or antenna or ground system, and is based on the assumption that the studio and transmitter buildings are close together. The video equipment is of simplified construction, and does not lend itself readily to expansion of facilities.

A second transmitter, offered at a price of approximately \$100,000, consists of the same picture and sound transmitters, but includes two complete camera chains which are capable of expansion and which provide switching from one to the other (thus allowing much greater flexibility in the presentation of dramatic material). Also included is a special film projector. The sound equipment of this transmitter is also somewhat more elaborate, corresponding to that supplied with regular broadcast stations of equivalent power.

It is evident that these prices are the rock bottom minimums. No account whatever is taken of the need for a transmitter site, studio space, special lighting facilities, telephone connections, the erection of a tower for the antenna, the antenna itself, video-signal circuits between studio and transmitter, and so on. It is a fair guess that it would not be possible to get on the air with regular programs, using the equipment described above, for less than \$150,000.

It is not to be wondered that one of the FCC prerequisites to the issuance of a television license is: "That the applicant is legally and financially qualified and possesses adequate technical facilities to carry forward the program."

### *The Present Situation—Receivers*

TO DATE only five manufacturers have definitely announced that they intend manufacturing and offering television sets for sale. They are: American Television Corp., New York; F. A. D. Andrea Co., New York; Allen B. DuMont Laboratories, Passaic, N. J.; General Electric Co., Bridgeport, Conn.; RCA Manufacturing Co., Camden, N. J. In addition, the Garod Co. of New York has offered a kit of parts for amateur constructors. This small list will undoubtedly be enlarged within the next few months. Philco Radio & Television Corp. has made no announcement yet, but is expected in the field, since it has maintained an active television engineering department for many years and at present operates an experimental television station in Philadelphia. Another set manufacturer with a definite television program is the Zenith Corp. of Chicago. Though Zenith's

### *Who's in Television*

#### *Receiving Set Manufacturers*

American Television Corp., New York City  
F.A.D. Andrea Radio Corp., New York City  
Allen B. DuMont Laboratories, Passaic, N.J.  
Garod Radio Corp., New York City  
General Electric Co., Bridgeport, Conn.  
Philco Radio & Television Corp., Philadelphia, Pa.  
RCA Manufacturing Co., Camden, N.J.  
Zenith Radio Corp., Chicago

#### *Cathode-Ray Tube Manufacturers*

Allen B. DuMont Laboratories, Passaic, N. J.  
Hygrade Sylvania Corp., Emporium, Pa.  
National Union Radio Corp., Newark, N.J.  
RCA Manufacturing Co., Harrison, N.J.

#### *General Development and Patent-Holding Companies*

Allen B. DuMont Laboratories, Passaic, N.J.  
Don Lee Broadcasting System,\* Los Angeles, Calif.  
Farnsworth Television, Inc., of Pa., Philadelphia, Pa.  
First National Television, Inc., Kansas City, Mo.  
General Television Corp., Boston  
Hazeltine Service Corp., New York City  
International Television Radio Corp., New York City  
Kolorama Laboratories, Irvington, N. J.  
National Television Corp., New York City  
Radio Corporation of America, New York City  
Transamerica Broadcasting Television Corp., New York City

\* Patent rights recently sold to RCA

### For \$60,000 You Can Buy—



—RCA's low-powered television transmitter, the first packaged job offered in the field. The \$60,000 price includes microphone and camera equipment (not shown here), but it does not cover lighting facilities or antennas or installation expense—not to mention the cost of transmitter site and studio construction. These additional expenses will mean a total bill ranging anywhere from \$150,000 on up. RCA's market for transmitters is further limited by the fact that, before it can make a sale, the smart prospect will have obtained a construction permit from the Federal Communications Commission, for equipment can't be installed or used until the government agency okays the project.

television transmitter is now nearing completion, Pres. Eugene MacDonald, Jr., recently stated in a letter to his stockholders that "general use of television in the home is just around the corner, for the stock salesmen only." Which goes to show that there are wide differences of opinion in the field.

In the set-manufacturing end of the business lies the most interesting story of all. The set makers have developed television eagerly and fearfully—eager for a new market, fearful of wrecking the old one. Most of the major companies are members of the Radio Manufacturers Association. The R.M.A. Subcommittee on Television Standards has been in operation for nearly five years, and has done yeomen's service in bringing order out of a highly complicated tangle of differing technical and commercially-grounded opinions. In 1934, there were three or four warring camps in television research. In 1938, the committee had won practically unanimous support for its set of standards.

These standards form the basis of a system (not the only system) by which television can begin operations. They were recommended by the R.M.A. to the FCC and

one, fixing the 6,000 kc. frequency band for station assignments, has been tacitly accepted by FCC in its reallocation of ultra-short wave services, but no other public word of endorsement or rejection has come from Washington. It is rumored that FCC has asked the R.M.A. whether its suggested standards would abet the formation of monopoly in the television field, and has also called for a statement of the contributions to television of the several manufacturers in the R.M.A. roster.

ALL the set manufacturers previously listed (including the DuMont Laboratories which proposes to compare the R.M.A. standards with a new system of its own devising) have begun building receivers to work on the basis of the R.M.A. standards, and it appears that these will set the pace for all future work, barring a revolutionary demonstration of superiority on the part of some other system, and then only if the demonstration occurs within a short time.

The industry's uneasiness about standards stems from experience in other fields of endeavor. When the dimensions of railroad track were standardized in 1840, the values chosen seemed right and proper at the time. But for 50 years since there has been continual carping. In television the same situation is inevitable. No matter how reasonable the standards seem now, some day they will seem less than perfect, and whoever sets the standards today will take the blame tomorrow. The members of the R.M.A. committee seem resigned to this fate; at least, they have revealed their hand. But the FCC desires not to be in this situation, at least not until it can't be escaped. Hence the silence on standards.

Eventually, some decision must be made, and from the industry's standpoint the sooner it comes the better. It is hard to see how commercial licenses can be granted to television broadcasters without some requirement concerning the standards of transmission which must be maintained to protect the public investment. The standards, once set, might conceivably be changed without dislocating the whole structure of the television service, especially if the early sets are built with this possibility in mind. But a change of standards involves inconvenience to the public at best, and complete obsolescence of equipment at worst, and it seems likely that changes cannot be tolerated. Progress in changing the standards can be made only by offering a wholly new service, perhaps on the 12 channels as yet unused. Meanwhile, it seems certain that very great improvements can be made within the structure of the standards at present proposed.

THE first sets coming out are arousing wide interest, American Television Corp. offers receivers under the name Videor—two consoles with five-inch picture screens, one table model with a three-inch screen, a special console model with a separate "Kinet" viewing attachment. The prices range from \$125 to \$395.

No details are as yet available on the F.A.D. Andrea sets other than that the price range will be from \$175 to \$595, and that a kit of parts will be offered to amateur constructors, at a price of \$79.50.

DuMont Laboratories have announced two models. The table model measures 15 by 24 inches by 25 inches deep, contains a 14-inch cathode-ray tube producing an 8 by 10-inch picture. The price is \$395. A console model

measuring 44 inches high, 22½ inches wide, and 25 inches deep sells for \$445. Demonstration models of these receivers have been in the hands of department stores in New York and Newark, N. J., for several weeks.

General Electric has three chassis in view, containing 5-, 9- and 12-inch tubes respectively. These chassis will be employed in a variety of cabinets. The 12-inch tube will be used in a console model only, the others in table or console models. G.E. plans are still in the formative stage, hence prices for the line are as yet undecided, but the range will probably be from \$150 or \$175 dollars at the low end to \$500 or \$600 at the top. The console models are so arranged that an all-wave radio receiver can be included in the cabinet, for an additional cost.

**T**HE RCA LINE will similarly contain models having 5-, 9- and 12-inch tubes. No descriptions of the receivers have been released, but a fairly accurate idea of the more expensive models may be obtained from the RCA receivers used in the "Television Tour" demonstration at Radio City. These receivers are massive upright consoles, containing a 12-inch cathode-ray tube and a total of 32 other tubes.

The cathode-ray tubes mentioned are expensive, but fortunately do not require too frequent replacement. At present four manufacturers are offering one or more types of cathode-ray tube suitable for television use: DuMont Laboratories, Hygrade-Sylvania Corp. of Emporium, Pa.,

National Union Radio Corp. of Newark, N. J., and the RCA Manufacturing Co. Other makers of cathode-ray tubes are Western Electric and General Electric. Present prices range from \$25 for a five inch tube to \$95 for the larger sizes. A tube may be expected to last several hundred hours, possibly well over a thousand. On the prospective program schedules of 4-5 hours per week it should have a useful life of one to four years. The tubes must be carefully protected, since the external air pressure on them (against the vacuum inside) amounts to several tons. If one collapses, the resulting "implosion" may scatter glass over a wide area. Many receivers will be provided with protecting plates of shatterproof glass.

Two types of fluorescent screen are available; producing green light (green and black pictures) and white light (black and white pictures). The green screens are more stable and have somewhat longer life, but the white screens seem to be the unanimous choice of manufacturers at present.

### Television As an Advertising Medium

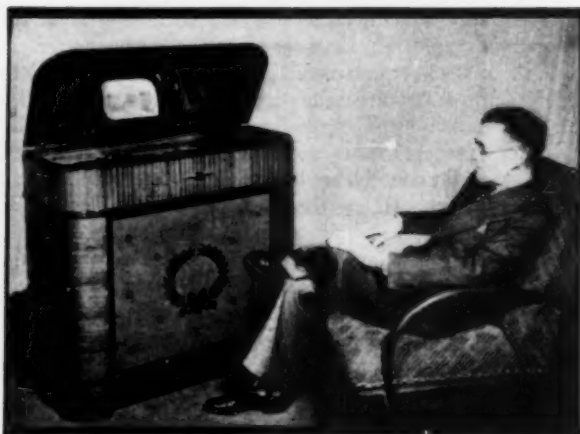
**A**PPRAISING the potential worth of television as an advertising medium involves some guessing as to the reaction of the public to the new art, and the judgment of the outside advertising man should be combined with that of the men in the television field itself. Those in the television departments of CBS and NBC, who know the problems of selling sound broadcasts, say that the "desirability factor" of sight-plus-sound presentations, in which you can see the advertised product or service as well as hear about it, is from two to ten times as great as that of sound alone. (Specific tests at the Indiana State Fair indicated that the public reaction to visual-aural attractions was three times as great as that to the simple spoken word.) They add the cautionary note that the visual advertising has got to be good since television programs demand the undivided attention of their audiences. Advertising that can hold that kind of attention should go places in the new medium.

Present plans are that television programs will be restricted to three or four hours a day at most, on the argument that this is about the maximum period for which you can count on getting the concentrated attention of profitable-sized audiences. Television specialists emphasize the advertising advantage of the concentration of time and the reduction of competition from other programs, as compared with sound radio. In getting their high "desirability factor" they multiply the effect of attention-concentration by that of time-concentration.

**C**ALCULATIONS of the broadcasters indicate that 400,000 television sets must be in homes in the New York area—where the new venture will start—before an advertiser can afford to sponsor and pay for the complete costs of the program. The guesses are that this will take from 5 to 10 years, but this sort of guessing is dangerous, since it may be proved too conservative in the first year, or too optimistic about the first 25 years. Taking it on its face value, the fact remains that sponsored broadcasts which actually pay the costs are at least five years away.

The cost of television service in England has been announced as \$1,000,000 for one hour a day for a year,

### Looking In at the Receiving End



*"The first sets coming out are arousing wide interest." 1938 ended with five manufacturers ready to go in the household receiver market, but this list will undoubtedly be enlarged during 1939. Console and table models will be available to the living-room looker-in. Prices will range all the way from \$100 to \$1,000. (The corresponding quality in sound receivers would cost roughly from \$25 to \$250.) This picture, to help you visualize yourself at the receiving end of television, shows a General Electric console model which has been set up so that an all-wave radio can be included in the cabinet. Watching a program on its television mirror, you would see a picture measuring approximately 8 inches by 10 inches.*

### Television Stations (Ultra-Short Wave Service Only)

#### Experimental Licenses

New York City—W2XAX	Columbia Broadcasting System	950 watts
New York City—W2XBS	National Broadcasting Co.	12,000 watts
New York City—W2XBT (portable)	National Broadcasting Co.	400 watts
New York City—W2XDR	Radio Pictures, Inc.	1,000 watts
Boston, Mass.—W1XG	General Television Corp.	500 watts
Philadelphia, Pa.—W3XE	Philco Radio & Television Corp.	10,000 watts
Philadelphia, Pa.—W3XP	Philco Radio & Television Corp.	15 watts
Springfield (Philadelphia), Pa.—W3XPF	Farnsworth Television Inc. of Pa.	250 watts
Camden, N. J.—W3XEP	RCA Manufacturing Co.	30,000 watts
Camden, N. J.—W3XAD (portable)	RCA Manufacturing Co.	500 watts
Kansas City, Mo.—W9XAL	First National Television, Inc.	300 watts
Iowa City, Iowa—W9XUI	University of Iowa	100 watts
Los Angeles, Calif.—W6XAO	Don Lee Broadcasting System	1,000 watts
Portable-mobile—W10XX	RCA Manufacturing Co.	50 watts

#### Construction Permits

Upper Montclair, N. J.— W2XVT	Allen B. DuMont Laboratories, Inc.	50 watts
Chicago, Ill.—W9XZV	Zenith Radio Corp.	1,000 watts

#### Applications Pending

(Exclusive of applications for changes filed by stations listed above)

Albany, N. Y.	General Electric Co.	3,000 watts
Bridgeport, Conn.	General Electric Co.	3,000 watts
Schenectady, N. Y.	General Electric Co. (development)	40 watts
Schenectady, N. Y.	General Electric Co. (relay)	40 watts
Milwaukee, Wisc.	The Milwaukee Journal	1,000 watts
San Francisco, Calif.	Don Lee Broadcasting System	250 watts

\* Has applied for 7,500 watts.

which figures out to \$2,750 an hour. No comparable experience is available in this country, but the predictions are that American costs will run a little, but not much, lower. More elaborate plans are under way here than in England, but higher efficiency and the presence of competition are expected to keep the price at perhaps \$2,000 an hour. Experience with sound broadcasting shows that the cost to sponsors using one of the major stations is one-half cent per hour per family, during the night hours. When television serves 400,000 families at a cost of \$2,000 per hour, the cost to the sponsors (omitting any profit for the broadcasters) will be the same—one-half cent per hour per family.

This price may be compared with that quoted by the movie exhibitors to show the extent of the potential competition between television and movie theaters. A movie lasting 90 minutes costs from \$200,000 up, with \$300,000 as a convenient basic figure. The production cost is then about \$200,000 per hour, or exactly one hundred times the projected cost of television programs.

THIS enormous spread in costs has been taken by some to indicate that television cannot afford program material of the type produced by Hollywood. It would require at least 100 stations paying for the program simultaneously, and each with a half-million or so families in the audience to cover the production costs. Since live-talent programs cannot be syndicated, the only possibility at present in view is that films prepared by Hollywood especially for television use could be sent out to all television stations, when and if 100 stations with half-million-family audiences are set up. Since no such

prospect is in sight for many years, it follows that Hollywood film cannot be used, unless the costs of producing it are reduced drastically. This is one view.

The other school of thought argues that film is the only solution to programs for stations located any distance from talent centers. Since this is so, Hollywood will make film for these stations, and the quality of it will reflect the price these stations can afford to pay.

In any event, there are more than a few indications of interest on the part of Hollywood. Three definite tie-ups between film companies and television companies are already reported.

THE INTEREST of movies in television is reflected in the annual report on the subject for 1938 by the Technical Committee of the Academy of Motion Picture Arts and Sciences. This report views the beginning of public service in 1939 with complete equanimity, says the threat to the film industry is remote and may never eventuate. It points out, rather, that when television grows big it is much more apt to be a customer than a competitor.

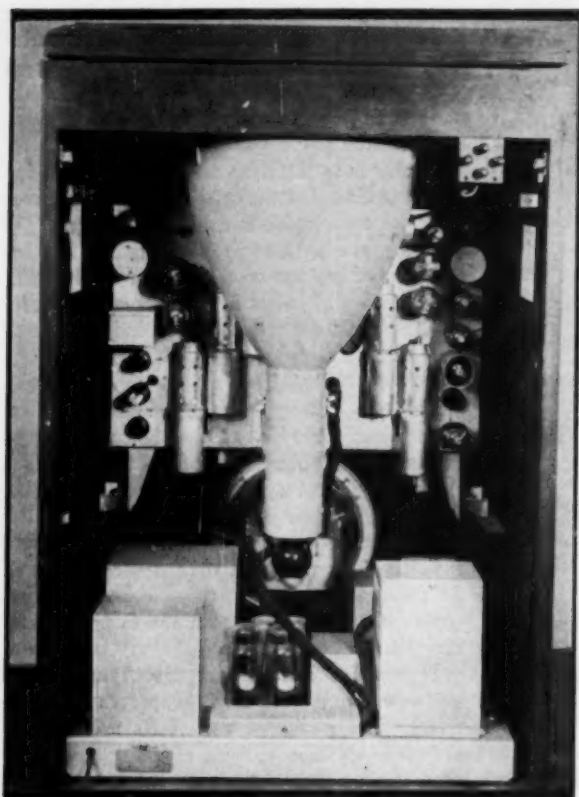
It remains a fact that television stations are wondering just how cooperative Hollywood will be when service starts and requests are made to show current movie releases over the air. To date only two full-length films have been shown by NBC in New York in experimental transmissions. These were "The Return of The Scarlet Pimpernel" and "She Met Him in Paris," neither of which were current releases when shown. It is certain that the film exhibitors will squawk loudly if and when they feel the slightest pinch of competition from television. The effect of the squawking will be all the more potent if the current government effort to disentangle the film producers from the exhibitors is successful.

It is also a question in the mind of the television impresarios whether or not their cameras will gain entrance into the ball parks and other professionally-controlled amusement centers. The supposition is that they will encounter no resistance so long as the service has an experimental character, and so long as there are no more than a few thousand receivers in the hands of the public. Beyond that, the park managers may get tough. If they do, one of television's greatest appeals will be restricted.

The place of the advertising agency in television has had consideration in the plans of the broadcasters. Use of the new vehicle will call for sharp changes in the methods employed by agencies in sound broadcasting. In the first place, television shows cannot be rehearsed outside the studios, as sound broadcasts can. Their production problems are so intricate, and the necessity of rehearsing before the camera so urgent, that it seems certain that production will rest almost completely in the hands of the broadcasters. The agency will serve the primary functions of selling the accounts, building the program, casting it (with the advice and assistance of the studio staff) and then turning it over to the broadcaster for actual production.

That the production problem is no cinch may be gath-

### Serviceman's View



Television receivers are complicated, contain from 20 to 35 tubes, in addition to an ingenious assortment of capacitors, inductors, resistors, transformers, and a maze of wires and sockets. The large, funnel-shaped structure which runs up through the center of the set, virtually the entire height of the cabinet, is a shield to protect the vital cathode-ray tube. It is at the top of this tube that the picture is reproduced; a mirror inside the cabinet lid reflects the image to the audience.

ered from the fact that the ratio of rehearsal time to "on-the-air" time is roughly 20-to-1 in television work, as against 7-to-1 in sound broadcasting. In another words, it takes about 20 hours of rehearsal before the television camera before a one-hour show is ready for the air. If the show is at all elaborate, the ratio may go as high as 50-to-1.

**It Looks Like This:** On the opposite page is the actual sized picture that appeared on the screen of a nine-inch cathode-ray tube when NBC's transmitter telecast an "automobile show" from New York's Rockefeller Plaza on the afternoon of Nov. 10. The page should be looked at from a distance of three or four feet to reproduce viewing conditions on a typical home set. It should also be looked at with the realization that an outdoor pickup like this, containing human figures at a distance from the camera, repre-

There have been no direct indications that advertising is coming into the television right away. For one thing, present licenses do not allow it. For another, the public reaction has not yet been tested, and the set distribution is at present next to nil. The set manufacturers themselves would be logical users of television advertising and they are likely to be among the first to avail themselves of the medium, when authorization is granted—long before sponsorship of television programs is firmly established on the same pay-as-you-go basis as sound broadcasting.

**T**HE list of companies which have stakes in the television field is a long one even now, and the money they have spent runs into the tens of millions of dollars. Most of this money has been taken from the reserves of large concerns already well established in the field. They have spent it definitely as an investment in a future market. A considerable portion of the financing has come from private individuals and banks. A smaller share has come from the open sale of stocks over the counter to any and all comers.

One of the chief worries of the industry is that the field will be promoted as an investment far beyond its ability to deliver profits under present restrictions. The Securities and Exchange Commission has been active in requiring full particulars of financial and technical backgrounds, patents owned or controlled, and similar items before granting registration to television stock issues. But any industry as new and untried as television is fundamentally a gamble, and the most honest and capable management cannot avoid failure if the public refuses to take to the new art. Television had one false start a decade ago with inadequate low-definition pictures, now almost forgotten except by those who bought stock, and there is no guarantee of overnight success this time. It is certain that much more money will be spent in television before any is made. The profit will come eventually, but only when the service is established and has a permanent hold on the affections of the public.

### Programs: Past, Present, and Future

**T**HE final test of all television development is programs. The scientific wonder of instantaneous sight at a distance has caught our imaginations, but our attention must be held by the daily fare of program material.

The public has shown that it likes to go to the movies, to the legitimate theater, to athletic contests, to the circus, to the zoo, to other sources of amusement based on the combined use of the senses of sight and hearing. The first thought of the television programmers is to bring this material directly into the home, and there is no doubt that

sents a particularly severe test of television. But the white edges are typical of most received images, are one of the system's yet unsolved problems. A receiver producing a picture of this size may cost you from \$250 to \$350. A smaller screen (picture four inches wide) should come from \$150 to \$200. The largest pictures, 8" x 10", call for sets ranging from \$400 up. Some day, say television's advertising counselors, the Ford officials shown here with their de luxe model will pay to put such a picture on the air.

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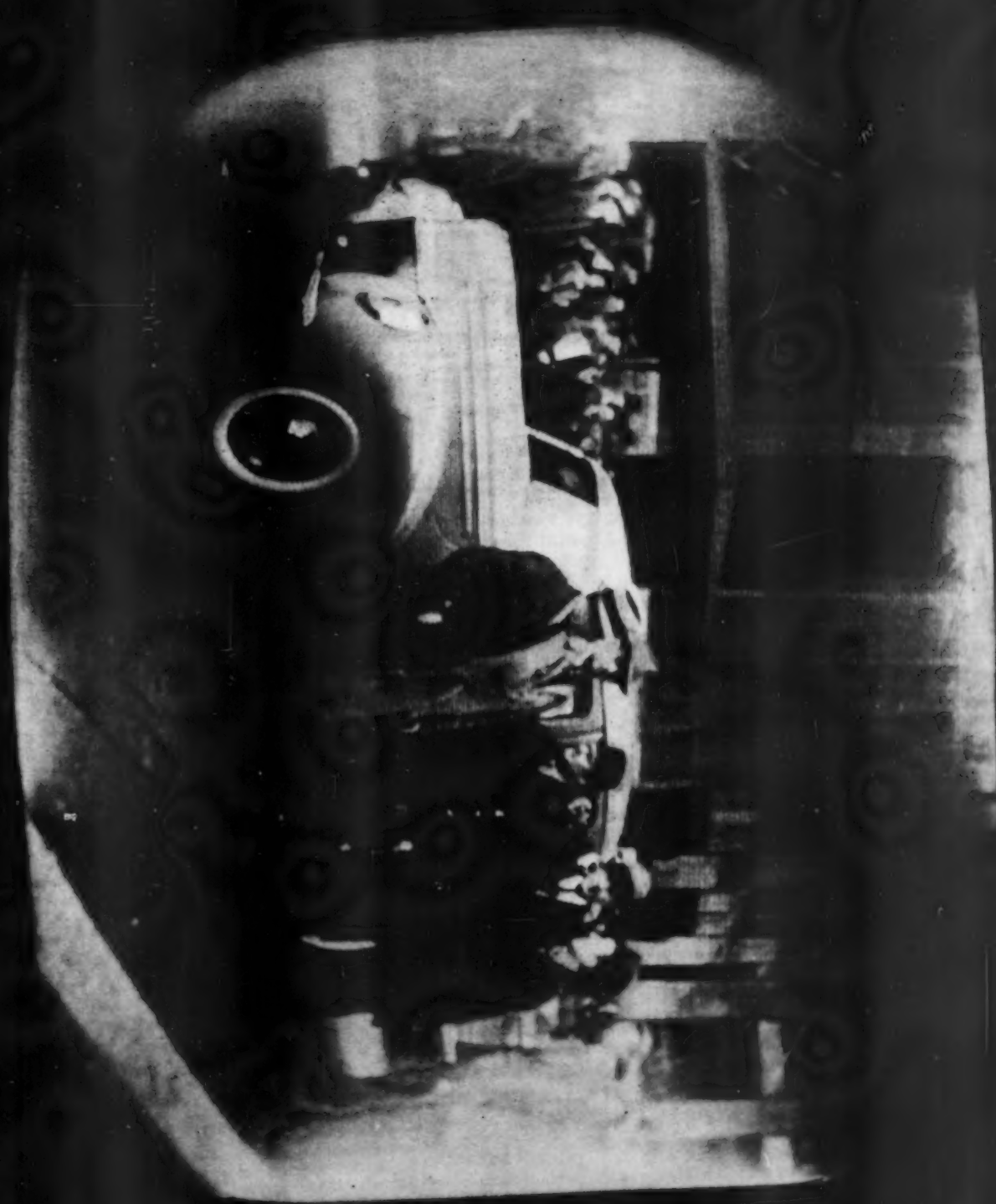
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many television programs will be simple transfers from the amusement arena to the living-room.

The second idea is that programs must be built which are distinctive to television. One example of immense possibilities is the spot coverage of news events as they occur. The NBC installation in New York has already made use of its portable camera equipment to cover such events, notably a fire which broke out on Ward's Island in the middle of New York's East River when the television truck happened to be nearby. Luck will play a large part in the coverage of events like this, but they will more than make up for their comparative rarity by their extraordinary appeal. Imagine, for example, television coverage of the Hindenburg disaster.

**S**TILL other programs, distinctive to television, are provided by intimate glimpses of life as it is lived. The success of the pictorial magazines in portraying such material in static pictures indicates the appeal similar treatment would have in television. The effect of immediacy which grips every televiewer, and which can be enhanced by clever planning and presentation, is an invaluable tool in a wide range of "human" programs ranging from slums to night clubs.

Dramatic presentation is a difficult device to use because it is not distinctive to the art. Plays written for the stage and produced on television have proved somewhat disappointing, seem stilted and out of place. But dramatic technique can, and undoubtedly will, be developed to make use of television's special appeal, the sense of immediacy and presence. Sound radio has found one of

its most amazingly successful programs in the "script show," dramatic sequences continued from day to day much in the nature of the newspaper strip cartoons, and just about as artistically done. No doubt television will find a similar peg on which to hang its dramatic presentations.

Television programs have undeniable possibilities in education. It may be that the public will like being educated visually better than it does aurally. If so, the television stations will give them education. Attempts in this line have already made their appearance, and seem to have an appeal entirely lacking in education by ear. Travelogues, either directly picked up in the local area or illustrated with film for subjects beyond the camera's range, can be counted upon.

Then there are the innumerable possibilities of interesting exhibits built about articles for sale: a fashion show, an auto show, exhibits of gardening and other hobbies. The list has no end. Such exhibitions can be deadly boring or fascinating, depending upon the imagination or "touch" of the producer who stages them.

Television programs presented to date have shown some bad and some very excellent performances. The NBC station in New York has presented in the neighborhood of 100 programs during tests of its system in the past year. They have been viewed by RCA technical personnel, by a few scattered amateurs who have built receivers, and on rare occasions by the press. The program material has included newsreels and *The March of Time*, dramatic presentations, usually in the form of half-hour one-act plays, a complete and highly expert presentation of a Sher-

## Financing Television

Now that television is emerging from the laboratory and moving, however slowly, toward the production line, the infant industry finds itself squarely up against the problem of raising capital—largely on patents and prospects.

Yet finance they will—the good and the bad alike. Having little or nothing in the way of inventory, plant, or equipment to mortgage, about the only medium available for the raising of cash is common stock. And, until they get into production and until they iron out their respective patent rights, all these companies' common stocks will look very much alike.

Of course, the financing problems and the financing methods of different companies will vary. Those that are moving logically from radio into television—companies such as the Radio Corporation of America, Columbia Broadcasting System, General Electric, Philco Radio & Television Corp., and Zenith Radio Corp.—presumably can finance their television activities out of earnings from other sources. A few others have been taken under the wings of large corporations in other more or less allied lines. But others will sell common stock to the public.

The way these companies have raised capital and will raise capital probably is most easily explained by listing a few examples:

**Allen B. DuMont Laboratories.** This company, which has in the past about broken even out of earnings from other sources, was almost ready to go to the public with a stock issue a little over a year ago. Bad markets intervened, and an arrangement was subsequently made with Paramount pictures. The DuMont management owns the entire issue of 56,000 shares of Class A Common stock. Paramount owns 14,000 shares of Class B and has options

to buy, at par value of \$1 a share, the remaining 42,000 B shares. In return for these options, Paramount agrees to lend the company all or any part of \$200,000 for 10 years. (The A and B issues share alike in dividends, each class elects three directors.)

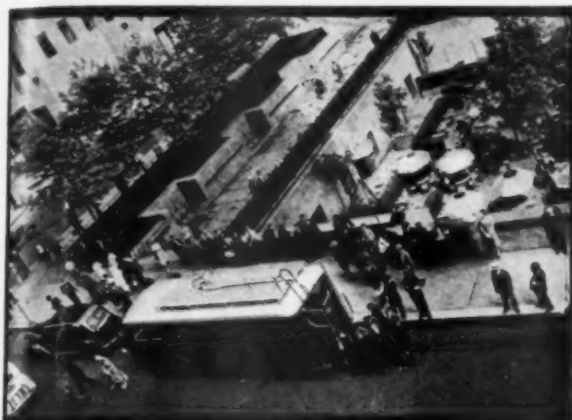
**American Television Corp.** For this company, J. A. Markel Co. offered 99,500 shares of common at \$1 a share. The issue being smaller than \$100,000, the company asked exemption from the Securities Act of 1933 by reason of the clause in the law which permits the Securities and Exchange Commission to exempt issues of such size. (The underwriters received a commission of 15¢ a share and a bonus of not more than 8,467 shares of stock.)

**Farnsworth Television.** This company is transferring all its assets to Farnsworth Television & Radio Corp. Holder of each present share will receive 46 common shares in the new company. This involves issuance of 690,000 of the 2,000,000 authorized shares. The charter permits the management to issue additional shares for acquisition of plant and inventory and for other purposes. The company, which heretofore has been largely financed by West Coast interests, is understood to be seeking eastern banking support in raising additional capital.

**International Television Radio Corp.** This company, which has 2,479,990 shares of stock outstanding, qualified an additional million shares with the SEC (at a cost of about \$50,000) for offering to the public by Mayhew & Reilly at \$1.60 a share. (Underwriters' commission was 40¢ a share.)

**Transamerica Broadcasting & Television Corp.** This company has already been taken under the wing of motion picture interests. Warner Bros. bought a 65% stock interest in 1936.

## A Special Job for Television—The News As It Happens



*Those who have studied television's program possibilities think the outdoor pickup is one of the best bets for winning wide acceptance. At the left, Rockefeller Plaza in New York City sees a demonstration of one of those "mobile units" that may soon be fixtures at the big outdoor sporting events. (And how would you like to look in—from your armchair—at a major*



*football game?) Where a broadcast drama calls for an outdoor prospect that's bigger than the camera's eye will catch, television, like the movies, can do it with models in the special-effects studio. The model of New York Harbor at the right above was used by NBC to show how, some day, television cameras in airplanes can help the admirals direct fleet maneuvers.*

lock Holmes mystery, one or two full-length movies, educational talks (the photoelectric cell, ancient and modern methods of farming, the world of invisible organisms) a fashion show, a demonstration of the new autos (with a clever interweaving of film to show the virtues of the new mechanical marvels), an exhibition of figure skating, the Ward's Island fire, and, inadvertently, one suicide (not put on the air, but viewed on the monitoring equipment). Announced programs in the Don Lee set-up include a televised dramatic serial in 15-minute intervals, dramatic monologues, intimate glimpses of circus life, and televised presentations of regular Don Lee broadcasts, including household hints, sports, and news of Hollywood.

**I**T is hard to judge the worth of these programs from so close a perspective, especially since it is impossible even for the blasé televiewer to rid himself of the sense of awe which surrounds the system, and which exists entirely aside from the merits of the programs themselves. But it seems likely that programs at the present level are fully capable of capturing the interest of the audience, at least in the initial stages of the new service. As people become more used to the system and the novelty appeal wears off, the level of program material must, no doubt will, rise. The most encouraging aspect of programming is the oft-expressed determination of the program-builders to keep a close eye on audience reaction.

The outlook for the immediate future may be summed up briefly. Receivers are now in production and will be offered for sale by various concerns some time between the first of the year and the first of May. The latter date is accepted by most manufacturers but probably there will be some jumping of the gun by independents. At present there seems to be no likelihood of program service in New York until the opening of the World's Fair, April 30, if all goes well. At that time NBC will definitely begin service. The CBS transmitter will take the air on or about

the same date, but it may be several months before the installation has gone through the "shake-down" period and a normal program schedule begins. The Don Lee installation in Los Angeles, which has recently undergone a shift in frequency to conform to the R.M.A. standards, will presumably keep up with its present schedule of programs, but plans for releasing receivers in that area are not yet complete. Service in Philadelphia, Boston, Iowa City, and Kansas City may be offered at any time, since there are licensed stations in each of these cities, but it will surprise everyone if the move is made before a year or more of service in New York City has been offered. On the results of this initial "market research" will depend the plans for the rest of the country.

Meanwhile, all eyes are on New York. Will it outdistance London in selling receivers and providing program hours? Everyone seems confident that it will. This confidence has inspired the editor of RADIO RETAILING to estimate that between 20,000 and 30,000 sets will be sold during the first year of broadcasting—four or five times the number sold in London. Some estimates top 100,000. If such sales come to pass, the industry will feel that the new market has been found, and sale pressure will begin with a vengeance in as many cities as can be found ready to supply programs.

### REPRINTS AVAILABLE

1939—TELEVISION YEAR is the fifteenth of BUSINESS WEEK's special reports to executives. Copies will be available in reprint form. Single copies will be mailed to BUSINESS WEEK readers upon request without charge. Additional copies will be billed at the rate of 10¢ apiece; quantity-order prices by arrangement. Requests for reprints, whether for single copies or larger quantities, should be addressed directly to W. T. Chevalier, Publisher, BUSINESS WEEK, 330 West 42nd Street, New York, N. Y.

## Penny Arcade Par Excellence



Latest newsreels for a nickel will be available in hotel lobbies, railroad stations, taverns, and public places When Mills Novelty Co., Chicago,

gets distribution on its newest slot machine, exhibited at the convention of the National Association of Coin-Operated Machine Manufacturers.

## PRODUCTION

### Wall-Cooled Air

Lewis Scott tests his method by building one-room house in his factory.

AS A FINAL TEST to the new air-conditioning equipment which puts his U. S. Patent No. 2,118,949 into production, Lewis L. Scott, president, Scott-Newcomb, Inc., 1922 Pine St., St. Louis, erected a one-room house in his factory. Like Dr. C. A. Mills of the University of Cincinnati, he had noticed that skiers can strip to the waist in near-zero temperatures if the sun shines with sufficient brilliance. Conversely, he had found that when he sat too near to a closed window in a highly heated room, and the window was chilled by the cold winds of winter, he lost enough of his body's heat to the cold window to make him feel chilly.

#### How System Operates

Mr. Scott reasoned that if he could keep the walls and ceilings of a room reasonably cool, and keep the inside air in motion, he would be comfortable during the hottest summer, no matter what the outside temperature. He turned to cooling air by the well-known method of evaporating water, but found that it increased humidity in the room to be cooled. Thereupon he decided that his best bet was to circulate his evapora-

tively cooled air through ducts in the walls and thence across the ceiling to the attic. At one stroke he got rid of his humidity trouble, cooled the room, laid a protective blanket of cooled air in the attic to offset the heat of the sun's rays which may reach 165 deg. F on the roof.

The little factory house, therefore, has in its "basement" a motor-operated blower which sucks air from the room (creating circulation therein), plus a little outside air to freshen the whole, and blows it through a water spray and a filter up through ducts in the side walls and ceiling and out. This takes care of summer air-conditioning and comfort. For winter Mr. Scott closes a damper and shunts his humidified air through heating coils connected to a Scott-Newcomb heater, heating the room to just the right degree of temperature and relative humidity. A two-speed motor permits the blower to operate at a lower speed in winter than in summer.

Readings show the efficiency of the system for summer cooling:

Outdoor dry bulb temperature	100 deg. F
Outdoor wet bulb temperature	74 deg.
Relative humidity outdoors...	29%
Water temperature.....	75 deg.
Room dry bulb temperature..	80 deg.
Room wet bulb temperature..	70 deg.
Relative humidity in room....	48%

Total heat above 0 deg. outside is 2.76 B.t.u. per cu.ft.

Total heat above 0 deg. inside is 2.49 B.t.u. per cu.ft.

While the cooling effect is dependent upon wet bulb temperatures, Mr. Scott points out that there are many sections of the country with little humidity during the heated months. Where, as on the seacoast or in river valleys, humidity is high, it is a simple matter to dehumidify the evaporatively cooled air with silica gel or activated alumina or some other medium. Heat for regenerating these materials then comes from the heater which runs intermittently in the summer, anyway, to supply hot water for household purposes.

### New Invisible Glass

Two methods devised by scientists at General Electric and at M.I.T.

TWO NEW METHODS of rendering glass invisible emerged from the laboratories this week. Unlike the well-known method of making show windows invisible by curving glass inwardly to eliminate reflections, both new methods involve coating both sides of windows, lenses, showcases, and such with thin 4/1,000,000-inch chemical films.

Being almost exactly one fourth a light-wave in thickness, such a film causes glare-producing waves of light to cancel each other. Purest uncoated glass transmits 92% of light; coated glass transmits 99% plus, as shown by a coated strip of glass on a portrait of General Electric's Dr. W. R. Whitney (see below).

First coating method, which was developed by Dr. Katherine B. Blodgett of G.E.'s research laboratory, consists of dipping glass in unrevealed chemicals. Second method, developed by Dr. C. H. Cartwright and Dr. A. F. Turner of Massachusetts Institute of Technology, calls for spraying glass with sodium or aluminum fluoride. Neither of these methods is ready for commercial production and sale.



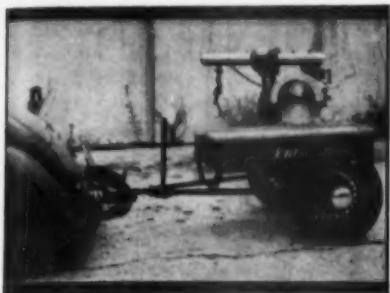
## NEW PRODUCTS

## "Skid-Chek"

If AUTOMOTIVE TIRES refuse to achieve traction in snow or slush, or on greasy pavements, sprinkle on them a chemical powder, known as Skid-Chek, produced by Skid-Chek Corp. of America, St. Albans, Vt. Canadian users say that it works equally well on the soles of rubbers and galoshes.

## Mobile Radial Saw

MOBILITY AND VERSATILITY characterize the new Comet Radial Saw for cutting wood, metal, or stone, particularly when



it is mounted on a special trailer. As developed by Consolidated Machinery & Supply Co., 2031 Santa Fe Ave., Los Angeles, the saw may be adjusted easily to do cross-cutting, ripping, compound mitring, rabbeting, dadoing, etc.

## Air Activator

If HEAT DOES NOT CIRCULATE as it should from the heating radiator or register, put a new Air Chief Air Activator on the



job by standing it on top of the offending unit. The activator's silent, overlapping-blade, electric fan will throw heat in any direction desired. It is manufactured by W. R. Ames Co. and distributed by Air Conditioning Research, 150 Hooper St., San Francisco.

## Welding Control

If THE NEW Arc-Length Monitor is used by a welder, he knows instantly when the voltage goes too high or too low for the production of uniformly high-quality welds. The instrument, which was de-



## \$2,417,000 More Volume and 4.8% Net Profit on Sales Follow Change in Financing

A simple change in financing opened the way to a remarkable upward surge for the KAPPA\* Company.

Sales volume had dropped to \$7,583,000 in 1935. Geared to do twice that volume, the shrinkage found the company operating at a loss and short of working capital.

In three years, with our accounts receivable plan providing a continuous, ample fund of cash, these were the results:

- ★ Annual sales volume was up 32% to \$10,000,000.
- ★ Net worth was nearly 20% greater.
- ★ Net operating profit was 4.8% of sales.

Investigation of our accounts receivable financing plan convinced the KAPPA executives that it was practically tailor-made to fit their needs.

They weighed the advantages of non-notification (discounting receivables without having to notify the debtors); of non-interference with their credit supervision, customer relations or management.

They analyzed the cost and found it low. The advantage of discounting only in amounts and for periods of current needs compared favorably with long term loans which necessitated the accumulation and earmarking of cash to meet maturities.

They still choose to discount their receivables with us because this kind of banking gives them greater liquidity, makes it easy to finance profitable new business without delays or hampering limitations.

\* \* \*

The advantages of accounts receivable financing are not limited to situations where pressing financial difficulties are the main consideration. Greater liquidity will enable you to do more business on your present capital, increasing your profits without increasing investment; buy raw materials; meet tax payments or payrolls without borrowing. Our booklet, "CAPITAL AT WORK" will explain how. A free copy will be mailed on request.

\*A fictitious name, but the facts are taken from actual records in our files and can be certified.

## Commercial Credit Company

### Open Account Financing

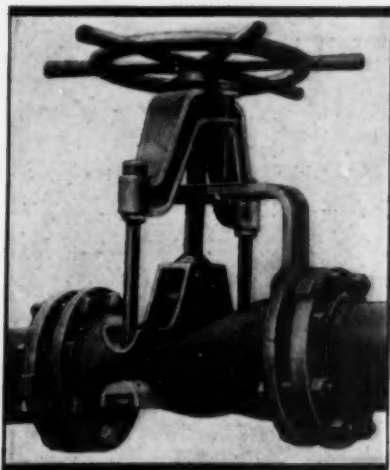
BALTIMORE

NEW YORK CHICAGO SAN FRANCISCO PORTLAND, ORE.  
CAPITAL AND SURPLUS MORE THAN \$65,000,000

veloped by A. O. Smith Corp., Milwaukee, lights two tiny electric lamps inside the welder's helmet when conditions are not right to maintain a steady arc. Two additional lights on the instrument itself (which looks something like a table radio) glow simultaneously for the welding supervisor to see.

### Pinch Valve

NO FORMER STUDENT of chemistry will fail to see in the new Massco-Grigsby Pinch Valve the principles of the handy



little pinch valves he used to stop the flow of liquids in rubber hose connections. The Mine & Smelter Supply Co., Marcy Mill Division, Denver, Col., makes the new device in 4-, 6-, and 8-inch sizes for pressures up to 150 lb. per sq. in. To prevent cracking of the reinforced rubber sleeve when closed, two recesses are molded into its inside wall diametrically opposite each other.

### Toro Snow Plow

A NEW ATTACHMENT converts a pneumatic-tired Toro Park Special Lawn Mower into a gasoline-powered Toro Snow Plow, 51 in. wide. Its maker, Toro



Mfg. Co., 3100 Snelling Ave., Minneapolis, will also supply a revolving brush to enable an operator to plow and sweep a skating rink at one operation.

## MARKETING

### When is Scotch?

**Ballantine's whisky assailed by whispering campaign on use of Irish grain.**

FROM THE COMPARATIVELY wee figure of 135,000 cases in 1937, imports of Ballantine's Scotch whisky rose to the mickle estate of about 225,000 cases in 1938. This bonnie showing in the face of an apparent stabilization of total Scotch sales naturally aroused the ire of competition.

In the past few weeks New York retailers received anonymously reprints of an article from a British trade paper describing suits brought against Ballantine and other Scotch producers alleging that they

labeled as Scotch certain blends of Scotch malts and Irish grains. Retailers received also reprints from a Broadway dirt-dishing column referring to a "devastating decision in the London courts," and a million-dollar fine "for allegedly phoneying the age and contents" against a Scotch firm which a footnote declared was 21 Brands, Inc., distributors of Ballantine's in the U. S.

### The Real State of Affairs

Actually the British court actions relate to test cases as yet undecided. No question of false statements is involved. Nobody has been fined. U. S. import requirements have been fully met; FAA regulations require that all Scotch whisky

### Patman Bill Sponsors—Past and Present

OF THE 74 HOUSE MEMBERS who joined forces to sponsor H.R. 9464—Rep. Patman's "death sentence" chain store tax bill of last session—32 of them (those whose names are italicized in the following list) won't be back. Not even chain store propagandists would maintain that these 32 lost in the primaries or the elections because of their advocacy of the Patman measure, but their absence can at least be partially explained by the swing against all radical proposals for business regulation.

ALABAMA <i>Patrick</i>	INDIANA <i>Gray</i> <i>Schulte</i> <i>Farley</i>	MISSISSIPPI <i>Colmer</i> <i>Collins</i>	OKLAHOMA <i>Smith</i> <i>Rogers</i> <i>Massingale</i>	Patton <i>Sanders</i> <i>Thomas</i>
ARKANSAS <i>Kitchens</i> <i>Cravens</i>	IOWA <i>Wearin</i> <i>Harrington</i> <i>Gilchrist</i>	MISSOURI <i>Zimmerman</i> <i>Cochran</i>	PENNSYLVANIA <i>Dunn</i> <i>Crosby</i> <i>Allen</i> <i>Drew</i>	UTAH <i>Robinson</i>
CALIFORNIA <i>Scott</i> <i>McGroarty</i>	KANSAS <i>Houston</i> <i>Patterson</i>	MONTANA <i>O'Connell</i>	SO. CAROLINA <i>Gasque</i>	VIRGINIA <i>Flannagan</i>
CONNECTICUT <i>Citron</i>	MICHIGAN <i>Sadowski</i> <i>Engel</i> <i>Dingell</i>	NEBRASKA <i>Bindersap</i>	SO. DAKOTA <i>Hildebrandt</i>	WASHINGTON <i>Hill</i> <i>Coffee</i> <i>Leavy</i> <i>Smith</i>
FLORIDA <i>Caldwell</i> <i>Peterson</i> <i>Green</i> <i>Wilcox</i>	MAINE <i>Oliver</i>	NO. CAROLINA <i>Weaver</i>	TENNESSEE <i>Atkinson</i>	W. VIRGINIA <i>Ramsay</i>
ILLINOIS <i>Fries</i> <i>Boyer</i> <i>Sabath</i>	MINNESOTA <i>Bernard</i> <i>Kvale</i> <i>Buckler</i> <i>Johnson</i>	NO. DAKOTA <i>Lemke</i>	TEXAS <i>Patman</i> <i>Poage</i> <i>Dies</i> <i>Maverick</i> <i>McFarlane</i>	WISCONSIN <i>Gehrmann</i> <i>Boileau</i> <i>Withrow</i> <i>Schneider</i> <i>Cannon</i>
IDAHO <i>White</i>		OHIO <i>Kirwan</i> <i>Kniffin</i> <i>Bigelow</i> <i>Sweeney</i>		

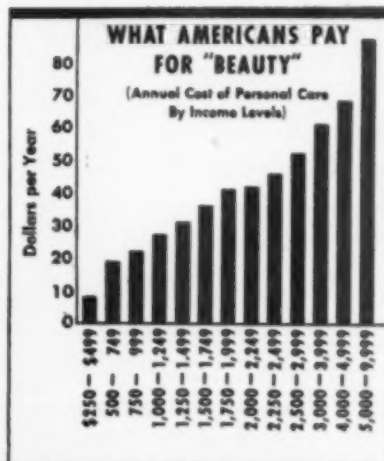
Of the 42 erstwhile sponsors who will be back, an appreciable number aren't expected to be very keen about the chain store bill—thanks in small part to the opposition of farmers, consumers, and real estate men and in great part to Rep. Patman's involvement in the sad affairs of McKesson & Robbins, Inc. (BW—Dec. 24 '38, p. 30). Nevertheless, Mr. Patman was still planning this week to hold his organization meeting just in advance of the opening of Congress and line up a full complement of sponsors for the tax measure which he had tentatively scheduled as "H. R. No. 1."

## Candid Camera Turned on Body Beautiful

HAIRCUTS FOR MEN are a necessity; facials or permanents for women are a luxury. That masculine cliché seems to be clinched by the Department of Agriculture's survey of expenditures on beauty culture in four cities in Washington and Oregon. Where family incomes were below \$1,750 a year, husbands paid more to their barbers than wives paid to beauty parlors. But in families whose annual incomes got above the \$1,750 mark, there was a neck-and-neck race until the income level reached \$3,000. Then the wives pulled away.

By no means is the survey definite.

Four towns—Astoria, Eugene and Klammath Falls, Oregon, and Olympia, Washington—do not constitute a statistical quorum for the United States. But they are symptomatic, and show that expenditures for soap and shaving cream are fairly constant for all income levels, but that the outlay for cosmetics, toothpaste and mouth washes and toilet articles advance as incomes rise (see table). And roughly speaking, out of every dollar spent on beauty, 60¢ goes to barbers and beauticians for personal services, 40¢ to drug stores, department stores, five and dimes, etc., for cosmetics and toiletries.



## Barber, Beauty Parlor and Cosmetic Expenditures by Income Groups

(Being an average of what white non-relief families in four cities in Oregon and Washington spent from July 1, 1935 through June 30, 1936)

Income Group	Personal Services				Toilet Articles and Preparations					
	Total	Husband	Wife	Others in Family	Total	Soap and Shaving Cream	Toothpaste & Mouthwash	Cosmetics	Toilet Articles	Other
\$250 — \$499	\$4	\$2	\$1	\$1	\$4	\$2	\$1	**	\$1	**
500 — 749	9	5	3	1	10	4	2	\$3	1	**
750 — 999	10	5	3	2	12	4	3	3	1	\$1
1,000 — 1,249	15	7	5	3	12	4	3	3	2	**
1,250 — 1,499	17	8	6	3	14	4	4	3	2	1
1,500 — 1,749	20	9	7	4	16	5	4	4	2	1
1,750 — 1,999	22	8	9	5	19	5	5	6	2	1
2,000 — 2,249	23	9	9	5	19	6	4	6	2	1
2,250 — 2,499	27	10	11	6	19	6	4	6	2	1
2,500 — 2,999	31	12	12	7	21	6	5	6	3	1
3,000 — 3,999	36	12	15	9	25	6	7	7	4	1
4,000 — 4,999	41	11	17	13	27	7	6	8	4	2
5,000 — 9,999	57	24	21	12	30	6	6	12	4	2

\*\* Less than fifty cents.

Source: U. S. Department of Agriculture Study of Consumer Purchases.

© BUSINESS WEEK

brought to this country must be from ingredients distilled in Scotland. The British government brought suit against the distillers to test the validity of labeling as Scotch, blends which employ northern Ireland grain spirits. This is an established custom with some of the leading companies. The final decision will apply only to sales within the British Empire.

21 Brands, Inc., isn't taking any special measures to combat the whispering campaign against Ballantine's. It depends on good-will promoted through firm price maintenance and exclusive territorial distribution to outlast the underground attack.

Ballantine's Scotch has no connection with Ballantine's (Newark, N. J.) beer which is heavily advertised in the New York metropolitan district. The whisky probably receives some reflected benefit from promotion of the brew.

## Frozen Food Co-op?

Independent packers in Pacific Northwest may form distributing agency.

THE INDEPENDENTS among packers of frozen foods in the Pacific Northwest, where 41% of the nation's frozen fruit and vegetable production at present originates, are flirting with the idea of cooperative distribution, in the Sunkist manner, as an answer to the "controlled marketing" plans of Eastern producers like Bird's Eye Frosted Foods and Honor Brand.

The idea was thrown into the discussion hopper at the recent annual convention of the Northwest Frozen Foods Association at Seattle, which was attended by 150 operators from some 60 companies.

Promoters of the united action plan

point out that, because Northwest packers have been operating pretty much on their own, depending chiefly on distributors' selling under private labels to handle their frozen foods, the large and well-established Eastern producers haven't yet felt much competition from any single packer in the area; that such concerns as Bird's Eye and Honor Brand, possessing extensive resources, already have gone far toward capturing a large number of the 8,000 retail outlets in the country.

## Uniform Grading Favored

Specifically, promoters of the idea are urging that Northwest producers cooperate to: (1) establish some form of uniform grading—a proposal the association has been considering for some time; (2) set up a uniform brand name by which Pacific products can be identified by consumers, as Sunkist has done

### ON LOANS OF \$1,000 AND UP WE CAN SAVE YOU MONEY

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**Victoria**  
TOILET TISSUES

BLACK CORE—world's largest selling 2000 sheet roll. Sold by reliable paper merchants everywhere. Ask about our complete line of interfolded tissues. VICTORIA PAPER MILLS COMPANY, PULTON, N. Y.

in the citrus field; (3) standardize distribution and marketing practices.

Along with distribution would go a consumer advertising effort to familiarize housewives with the standard trade-mark devised to identify Pacific products.

Also under discussion at the Northwest convention was the development of a process for quick freezing in cans by Food Freezers, Inc., San Francisco (BW—Nov 26 '38, p19).

### Frozen Food Pack Gains

The Northwest pack ran about 75,000,000 lb. in 1937, according to E. M. Burns, secretary of the association. Because several processors using the old cold-pack method were located there, the area got the jump on the rest of the country when quick freezing was first introduced commercially. The Northwest

had been freezing fruits for the bakery and restaurant trade and it was relatively easy for processors to change over a part of their operations to the new method. Vegetable freezing began about 1932.

While the Northwest's frozen food pack is still increasing annually, other parts of the country have been gaining on it and even running ahead on some items. Producers are up against transportation charges to Eastern markets of 1¢ to 1½¢ a pound and the higher wages paid farm labor on the West Coast.

On the asset side, Northwest producers enjoy high yields, almost no crop failures, a uniformly high quality yield, and a somewhat lower average land price.

## MARKETING ANGLES

### Idea Men Collect

"IDEA SUITS," which made such frequent headlines in the advertising news during 1938, got a big press again as the year drew to a close. Western Union dropped a \$6,500 verdict to Manuel G. Rodriguez, who successfully argued that he originated the idea of flat rate telegrams for tourists in 1930. After a five-day court fight, the Arthur Kudner advertising agency settled out of court with Neville O'Neill who claimed authorship of the idea "G.M. Means Good Measure" used by General Motors in 1935. A third controversy was carried over into the new year (to Jan. 18) when Monroe B. Le Voy applied for an injunction to stop Philip Morris from broadcasting its crime story programs over NBC on a charge that the idea was pirated from him.

### Chain Taxes—Con & Pro

IN ONE OF THOSE year-end statements John A. Hartford, president of the Great Atlantic & Pacific Tea Co., hailed the beginning of a trend away from chain store taxes. As applied to Patman's federal tax, that's a sound enough observation (page 34), but the Freedom of Opportunity Legion still thinks it has a good chance of pushing tough "Louisiana-type" taxes through the state legislatures of Iowa, Kansas, Georgia, Florida—and possibly Maine and Virginia.

### Double Price Standard

THE WHOLE IMPORTANT QUESTION of the legality of sales zones is bound up in the action which the Federal Trade Commission launched last week against General Baking Co.—the first big Robinson-Patman case to get under way in month. General Baking is accused of price discrimination because its Norfolk, Va., plant sells bread at 10¢ a loaf in the immediate sales area and as far away as Quantico, while in the area beyond around Fredericksburg the same bread sells at 8¢ a loaf.



Leaks are especially dangerous in roofs of power plants and other buildings housing electrical equipment. Water from these leaks may cause enormous damage to this costly equipment. Koppers Roofings have the property of "self-healing" small breaks that may occur in the roofs. For that reason, Koppers Coal Tar Pitch and Tarred Felt are favorite materials for the roofs of these buildings.

If your buildings are as important to you as those buildings are to their owners . . . if you want to avoid leaks . . . if you want to keep down your maintenance expenses . . . use Koppers Roofs of Coal Tar Pitch and Tarred Felt.

**KOPPERS COMPANY • PITTSBURGH**

BOILER AND POWER PLANTS • CASTINGS • COAL AND COKE • COAL CLEANING PLANTS  
• COKE AND GAS PLANTS • CREOSOTE • DEHYDRATION PLANTS • D-H-S BRONZE • FAST'S  
COUPLINGS • WESTERN FIRE HYDRANTS • INDUSTRIAL CHEMICALS • MUNICIPAL INCINERATORS  
• PISTON RINGS • PLATE WORK, TANKS • PURIFICATION SYSTEMS • RECOVERY PLANTS •  
SEWAGE DISPOSAL EQUIPMENT • SHIPS AND BARGES • ROOFING • TARMAC ROAD TARS  
• TAR PRODUCTS • TREATED TIMBER • WATER GAS GENERATORS • WATERPROOFING • VALVES

**K O P P E R S**  
THE INDUSTRY THAT SERVES ALL INDUSTRY

# MONEY AND THE MARKETS

FINANCE • SECURITIES • COMMODITIES

## Stocks Keep Tending Upward

During the past few weeks, most markets have taken obstacles in their stride and have suffered few relapses. Tire makers expect big gains.

PRICES IN MOST of the markets have given a pretty good account of themselves over the last few weeks. True, there have been only a few advances of any real significance. But, by the same token, there have been few relapses even though stocks have been beset by year-end tax selling and commodities have been held in check by the general slow-up for Dec. 31 inventory taking.

Markets have taken in their stride such things as the slump in steel operations to 38.8% in the final week of the year. Its clear that much of the seeming recession is due to holiday shut-downs. Thus, allowing for the holidays, the steel makers probably have been running close to 50%.

### Stock Prices Advance

In fact, the stock market gives every indication of finding the course of least resistance to be upward. Two weeks ago there was a modest rise in spite of heavy tax selling. And the middle of this week the rise was repeated.

Wednesday was the last day for tax

selling if transactions were to be cleared in the normal channels before the end of the year. Prices were lower at the start of the day. Then, quite dramatically, it became clear that most of the tax selling had been completed. Buying gained vigor. Just at the close, the New York Stock Exchange ticker fell three minutes behind the market, with prices moving up quite briskly.

News from the metal markets was pretty good, as the activity and strength in lead last week had foreshadowed (BW—Dec 24 '38, p 33). Buying of lead was not quite as brisk, due to holiday influences, but was still good this week. There was improvement in the volume or orders for zinc, even though the cut in the United States tariff on the metal goes into effect next week. Copper is held back by the fact that domestic quotations are still well above London.

In tin, there has been a definite pickup from the unsatisfactory conditions of the last several months. The can companies, according to the best information, have worked off burdensome inventories. The tin plate mills, several

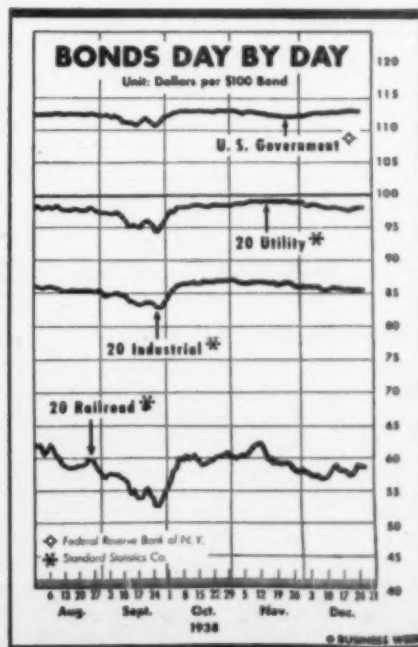
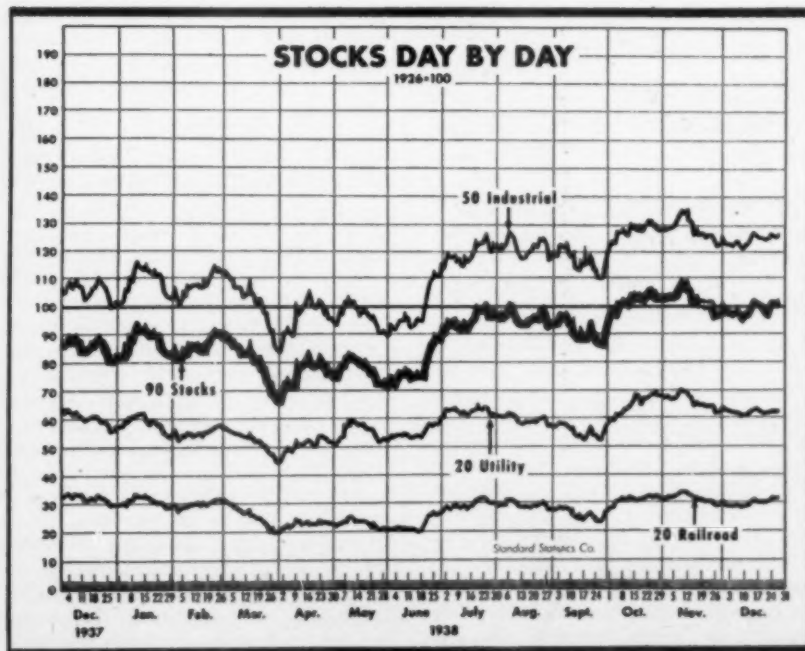
weeks ago, acknowledged the existence of widespread price shading and cut quotations on plate for delivery after the turn of the year. There has been a pick-up from a 30% rate to 40% operations for the tin mills, the can companies are back in the market for tin plate, and there has been some accumulation of can company stocks by investors who think those securities have been pretty completely liquidated in recent months.

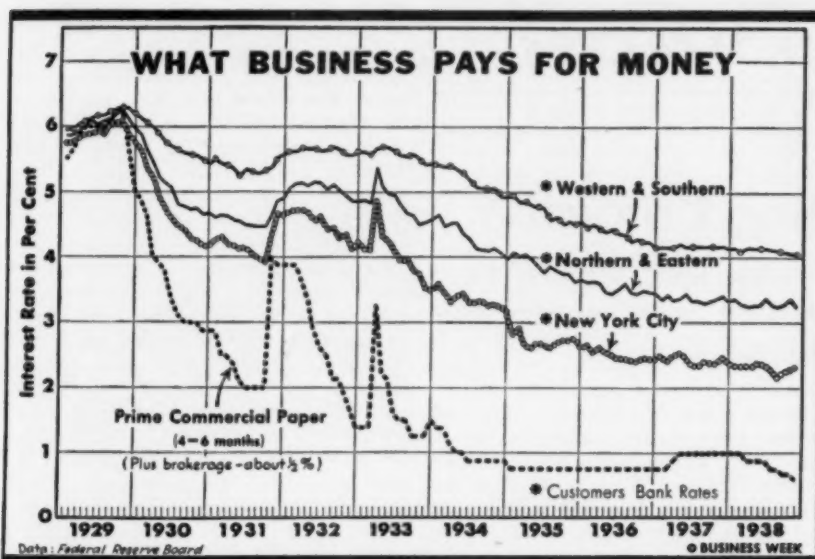
Railroad securities, both stocks and bonds, have done better over the last 10 days on the indications that Washington once more is taking active notice of the carriers' plight. It is clear no one has anything more than pretty general suggestions, that the all-important details will be left up to Congress. But even a constructive approach to the problem gives the long-suffering railroad securities holders renewed courage.

### Tire Makers See Gains

The striking improvement which has taken place in the rubber industry continues to attract attention in view of the prospect that 1939 tire sales may exceed 1938 by a good 10%. Tire shipments by rubber manufacturers from June through September were surprisingly large, due to unexpected replacement demand. Since that time, orders have been sustained by original equipment tire sales resulting from increased automobile output.

With the automobile industry looking for close to a 3,500,000 output of cars and trucks in 1939, against 2,600,000 to 2,700,000 in 1938, original equipment tire sales should be up more than 4,000,000. In fact, David M. Goodrich, F. F. Goodrich Co. chairman, sees 48,000,000 casings in 1939 an "attainable goal," against about 43,000,000 for 1938.





## Savings Insurance, 1939

**New plan is supposed to go into effect in New York, but banks hold back.**

SAVINGS BANK LIFE INSURANCE officially will come to New York—second state to adopt it, Massachusetts having had it for years—on Jan. 3. But, as a practical matter, only a few faltering steps will be taken in the next few days.

Initial fanfare will start with the sale of the first policy to Gov. Herbert H. Lehman (photogs and news reel men already have the pictures). Mr. Lehman's lieutenant-governor, Charles Poletti, already has been on the air to ask a "substantial number of mutual savings banks . . . to establish life insurance departments."

But, as yet, the savings banks haven't fallen over themselves. Three of the fairly large banks in the metropolitan area alone have announced themselves; four more upstate probably will be heard from in a few weeks. But the Savings Banks Association of the State of New York has never been ardent, and still leans to formation of a central body to sell life insurance for all the member banks. That plan, though, admittedly is still up in the air.

### State Prepares New Setup

The state insurance department has been busy setting up mechanics of launching the new plan. Inasmuch as the banks will sell life insurance over-the-counter (without agents, etc.), doctors to conduct examinations have had to be designated. Policy forms have had to be authorized. Many other details have had to be worked out, and the progress has necessarily been slow.

Meanwhile, the Savings Bank Life Insurance League of New York has chosen its officers and launched its

publicity in earnest. William Jay Schiefelin is chairman; Lancaster Greene is president; Sidney E. Wolff, who carried hod in the long fight for enabling legislation and organization, is executive vice-president; and A. F. Allison, vice-president.

Publicity centers around the theme of the "Brandeis Plan" (Justice Brandeis has always been regarded as the father of Massachusetts' pioneering venture). High cost and low cash value of industrial policies sold by established life insurance companies are challenged with the statement that the savings bank insurance cuts net cost from 30% to 50%.

Settlement houses in New York City have become actively interested in promoting the new insurance among the poor—who are the buyers of industrial ("burial" or "5-and-10") policies. There has been interest, too, among large employers who have had a satisfactory experience in Massachusetts with payroll deductions to buy insurance for employees.

## FINANCIAL ANGLES

### Invidious Comparisons

SECURITY ANALYSTS, who spend their lives making invidious comparisons between companies, received a fine Christmas gift this year. Some years back the Securities and Exchange Commission organized a Works Progress Administration project (BW—May 8 '37, p. 38) to dig out statistics from annual reports made to the SEC. The first result of this effort—covering 12 companies in the steel industry—has just been released. Balance sheet figures, earnings, sales and other basic data are compiled in various columnar arrays so that comparisons between companies and

comparisons of one company with the industry are self-suggestive. The report, entitled "Selected Information on Steel Producers," covers 63 pages of fairly fine print. Forthcoming reports will be on such industries as automobiles, heavy chemicals, building equipment, meat packing, and so on.

### Good Cheer

NEW YORK STOCK EXCHANGE member firms, and a great many investors as well, were pleased this week to learn that the International Nickel Co. of Canada had decided to allow its stock to remain on the Big Board list. For some time the company had argued with the Securities and Exchange Commission about publication of certain information, reputedly concerning sales and salaries. No compromise having been reached, the company talked of withdrawing its shares from listing in the United States. On Tuesday, however, the board voted against such action without, however, revealing whether a deal with the SEC had been achieved. The matter was important to many U.S. investors who own Nickel, to brokers who collect commissions on trading in this popular issue. International Nickel common last year was 19th in point of trading volume on the Big Board. More important, from the standpoint of commissions, it was sixth among stocks which did not sell below \$25 a share at any time during the year.

### Change in Name

COMES JAN. 1, and the time when the financial community announces most of its changes in partnerships, etc. Brown Harriman & Co., however, jumped the gun by a few days in announcing a change in the firm name (though little change in the firm itself) the middle of this week. The investment banking house becomes Harriman Ripley & Co. to end confusion with the commercial banking house of Brown Brothers Harriman & Co. The Ripley in the new name is for Joseph P. Ripley, president ever since formation of Brown Harriman in 1934.

### That Corn Corner

FORMAL CHARGES OF manipulating the price of September and December, 1937, corn contracts on the Chicago Board of Trade were filed this week by Sec. Henry Wallace against Cargill Grain Co. This climaxed 15 months of wrangling over the alleged existence of a corner in September corn and over what should have been done about it. The Board of Trade, charging Cargill had cornered the market in September corn, forced the company to settle with the shorts. Cargill's officers yelled, in effect, "We was robbed!" and brought action against the Board of Trade before the Commodity Exchange Administration. The board filed counter-charges. And now Sec. Wallace orders Cargill to show cause why it

## On Edison Board



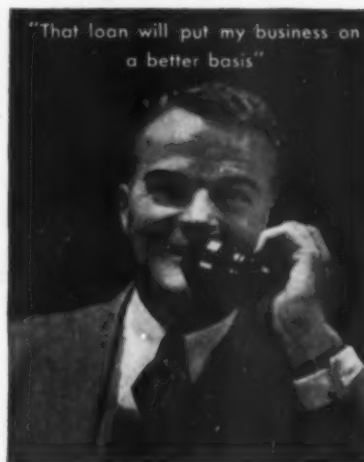
MRS. KENNETH NORTON, Westchester County clubwoman, this week was elected a trustee of New York's Consolidated Edison. She is the first woman to join the directorate of a major utility company.

should not be barred from trading in all contract markets until further notice. The action takes on added significance due to the recent U. S. Circuit Court decision holding a corner to be a violation of the anti-trust laws, thus giving shorts an opportunity to sue for damages totaling three times their actual losses (BW—Dec 24 '38, p. 35).

## Farm and Market

APPROXIMATELY A 10% GAIN in wheat prices has been scored over the last few weeks in the combination of sharply reduced winter wheat plantings for harvest in 1939 and the adverse weather which has prevailed over much of the western half of the belt. Now the Department of Agriculture confirms the trade's belief that little more than 46,000,000 acres were planted to winter wheat in the autumn of 1938 against 56,355,000 in 1937 and the all-time peak of 57,656,000 in 1936. . . . As the fifth month of the 1938-39 cotton season comes to a close, the United States has exported barely 2,000,000 bales against 3,300,000 in the Aug. 1-Dec. 31 period last year. Mill activity in England and Japan continues very slack. . . . The 17 sugar beet producing states have been allotted a quota of 1,030,000 acres for 1939. That compares with 931,000 acres actually harvested in 1938. The 1938 crop of 11,292,000 tons of beets was the largest on record, comparing with 8,749,000 tons in 1937. The only other year which came close to the 1938 harvest was 1933 with 11,030,000 tons.

## Life is BETTER because of banks



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### better for business men

Customers of this Bank are continually using loans to operate their businesses more profitably. Loans permit them to take advantage of cash discounts, to modernize equipment, to turn over capital more often.

### better for employees

Loans advanced by this Bank are making jobs because the credit extended enables a business to expand its operations. Buying more raw materials, replenishing stocks of goods, handling larger orders than could be done without the loan, are activities which create more jobs.

### better for citizens generally

Through supplying credit to municipalities, states and the nation, this Bank has always had a part in the growth and development of our country.

### for your betterment

Perhaps this Bank can help you in some of the ways outlined above, or through its other services. Your inquiry will receive prompt consideration.

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## BUSINESS ABROAD

### War Scares Are Revived in Europe

**Paris prepares for a showdown with Italy in next two months, and Berlin observers believe Germans will make new demands in March, proving that the Munich agreement provided nothing but a breathing spell.**

IN CONTRAST with the holiday calm on all markets in Europe, there is an undercurrent of political apprehension over the outlook for 1939. Paris is convinced that before the end of February, Italy—with the full backing of Germany—will push through its demands for a reshuffling of territory now under French control. The situation is likely to become critical, and to have a depressing effect on markets which are already nervous. But Paris believes that some compromise will be reached short of war. It is likely that Paris will sacrifice French Somaliland to Italy in return for some guarantee of the security of French Mediterranean possessions.

Private business in Berlin is extremely apprehensive. The sharp clashes between

Berlin and Washington have not been publicized in Germany, but executives know the details and believe that Reich officials are eager to avoid an open rift with the United States. At the same time, it is increasingly evident to those who know all that is going on behind the scenes that Munich brought no settlement of major problems. At best it provided a breathing spell which Germans fear now will last no longer than March when fresh demands for territorial revisions in eastern Europe are expected, again backed by a show of force on the part of the Nazis.

#### How Long Will Chamberlain Last?

British policy remains indeterminate. If Chamberlain is able to bring back

from his conference with Mussolini in Rome some compromise in the Mediterranean which the British can accept at its face value, he will be able to remain in office. If he does not, a general election is expected some time before the first of April.

A major war scare is almost inevitable in Europe in 1939, and BUSINESS WEEK's observers believe now that it can be expected in the first five months. None of them believes yet that it will develop into a war, though it surely will be sufficiently critical to have a serious effect on business.

#### Summing Up Lima Conference

It is because of the unsettled outlook in Europe that most Americans view the outcome of the Lima conference so pessimistically. Nothing was accomplished which will produce startling results in the near future. But that was not expected by any of the observers who are familiar with these meetings of the 21 American republics. Interests are too varied for all of them to agree readily to any drastic program for co-operation—either political or economic.

Whatever the opposition of such leaders as the Argentine to a revival of an active Monroe Doctrine policy, events in Europe next spring are likely to play into the hands of President Roosevelt in his plan for building up a bigger navy and a huge air force, whether or

### Japanese Capitulate in West Coast Ship Rate War



Hearings before the Maritime Commission in Washington in the ship rate war which has been raging between the Japanese and United States lines that carry coffee between South American and Pacific Coast ports came to an end abruptly when the Japanese agreed to accept the conference rate. The trouble started when the Osaka Syosen Kabusiki Kaisha and the Yamashita Kisen Kabushiki Kaisha cut freight rates on coffee from 20¢ to 50¢ a bag between Brazil and Pacific Coast ports. The two American flag competitors—Pacific Argentine

Brazil Line and Westfal-Larsen Line—maintained the \$1 a bag rate established by the Pacific Coast River Plate Brazil Conference, but protested to the Maritime authorities. As a result of the Japanese capitulation, a common rate has again been established for the coffee trade of the lines, but it has been reduced to 90¢ a bag for 1939. Members of the Maritime Commission who heard the case (left to right): Rear Admiral Henry A. Wiley, Edward C. Moran, Jr., Thomas M. Woodward, Max O'Rell Truitt, and Rear Admiral Emory S. Land.

not much is said about using them to "protect this hemisphere." And despite the losses to this country on loans made in the 1920's, a new lending program will be pushed by Washington next spring, and is likely to win despite the belief in private banking circles that the loans are extremely risky and probably will result in numerous new defaults. The loans will be advocated on the basis that they constitute the price of keeping the western hemisphere free from the domination of the European dictators.

### Russia's Newest Purge

Moscow (Cable)—Russia's new industrial rationalization campaign hit management this week, following the drive started a week ago to establish more rigid labor discipline. With most hostile elements weeded out of industry, the majority of inept executives sacked, and younger executives fast learning their jobs, the Kremlin is pushing its reform program among managers with better chances for success than at any time in the last five years.

The industries which are subjected to the most drastic going over are power, copper, lead, zinc, automobiles, machine building, shipbuilding, and the metallurgical group. In all of them, it has been discovered that enormous quantities of supplies have been stored in warehouses "for emergencies," in spite of the shortage of these very parts at numerous other plants.

Magnitogorsk, the huge steel plant in the Urals, is a good example of the problem now being tackled. For nine years, tons of electrical equipment have been warehoused at the great steel center. Squads of investigators are now rummaging through factory warehouses all over the country for unused parts and equipment which are being quickly inventoried and resold to plants where they are needed at once.

Biggest task of the executives who are trying to push through the rationalization program is to educate managers to the fact that it is no longer necessary to carry big stocks of spare parts—a habit originating in the earlier years before redistribution of industry brought plants closer to their sources of supply and before improved transport made obsolete the former practice of storing three months' stocks.

### Der Tag Expected Soon

Berlin (Cable)—Germany's new year outlook is clouded by apprehensions lest post-Munich appeasement may prove merely a breathing spell which is about to be followed by a resumption of aggressive demands in the East and the Mediterranean. The public is unaware of the seriousness of the German-American tension, but the fact that the government-controlled press has not published Sumner Welles' reply to the German note is

considered symptomatic that the highest quarters are anxious to avoid open rupture.

The new German-Czech trade agreement provides for a drastic increase in exports to the Reich, aiming also to restore economic ties between the Sudetenland and crippled Czechoslovakia. Czech exports will be expanded by large German orders with Czech manufacturing concerns, including Skoda. All indicators point to such a degree of control by the Reich over the Czechoslovak economy as the initiators of the Munich pact hardly anticipated.

### Britain Fears New Taxes

London (Cable)—Blanketed in an old time Christmas snow, England for a week has forgotten its troubles, but with the new year it is compelled to make its estimates on the prospects for 1939. Many factors, including the improved outlook in the United States, encourage hopes of a steady but not spectacular recovery. The two most important obstacles are the uncertain international situation, and the possibility that tax increases which may be voted when Parliament assembles in April will check any business upturn which may get under way.

There is considerable interest here in America's critical attitude toward Germany. The British are surprised at the apparent failure of Germany to make a closer estimate of American reactions which she can ignore neither commercially nor politically.

### French Markets Bullish

Paris (Wireless)—French markets, as anticipated, continue to be bullish. The Daladier government is expected to continue to be in power, and to push its "reform program." Small quantities of capital which had been sent to England during the earlier crises continue to dribble back to France for investment in gilt edge securities. There is a growing realization that Britain is not eager to be tied too tightly to France during the crisis expected in the Mediterranean early in 1939, but no important evidence yet that the French will revive their pact with the Soviet Union.

### Canada Strikes Oil

Home Oil brings in big producer in Turner Valley, provides Britain with important new source of oil within Empire.

Ottawa—Alberta oil held the spotlight in Canada during the week and will continue to do so into the new year. The reason is the bringing in of a big producer, Home Oil Co.'s No. 2 well, in the northern end of the Turner Valley field not hitherto proved. Alberta oil men now claim the proving of the northern end of

the Valley will give the field the classification of one of the most important in the world, and will put it at the top of the British Empire list.

Several wells are far down in the vicinity of the new producer. Home Oil stock moved up on the Toronto Stock Exchange from around \$1.15 to about \$3.60 and still is above \$3 as a result of the development.

Current production of the field is about 12,000 barrels a day but potential production is placed at four or five times that. Markets are now the worry of the industry, but the solution is likely to be found in special Empire defense requirements. (All of the principal sources of British oil are now in foreign fields—Iran, Venezuela, Netherlands Indies.) There is talk of a pipe line either to Vancouver or to Fort William at the head of Lake Superior, with the former favored. Railroads may offer competition for the pipe line project with a further freight rate reduction.

### Airplanes for Mexico

After hanging fire for a year, negotiations between the Mexican government and Canada Car and Foundry Co. for building of aircraft in Mexico have finally ended in a signed contract. Canada Car, now a leader in the Canadian aircraft field, will take charge of the construction in a government plant near Mexico City. The company may also fill orders for Mexico in its home factories at Montreal and Fort William.

### Steel Turns the Corner

The July-October decline in steel production has definitely stopped November picked up 18% from October, and production was still expanding in the first half of December. Although the decline at the peak reached 36% below last year, the year should close with only a slight total decline.

Manufacturing, mining, and power production were expanding at least through early December and shipments of nickel, copper, and asbestos were increasing. The economic index for the Dominion was off .1 point from the previous week and .4 point from 1937. British airplane orders are now working back to industries supplying materials, with some orders already placed. The aircraft industry is expected to feature the 1939 picture. The newsprint situation is still somewhat unsettled and forest operations are at present about 50% below normal.

### Good Dividend Year

Some indication of Canadian conditions in 1938 is reflected in dividend disbursements. Total dividends of companies listed on the Toronto Stock Exchange were more than \$3,000,000 below last year but there was a gain of 22 in the number of companies making disbursements. Of 261 companies paying divi-

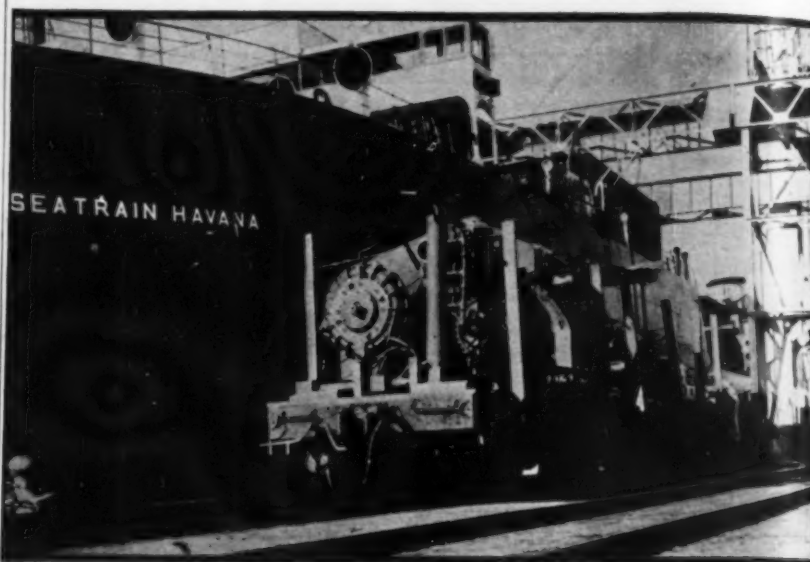
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## Big Oil Companies Will Drill in Cuba



Early in 1938, the Cuban government passed a new petroleum law which removed the uncertainty which had prevented oil companies from intensive drilling on the island in spite of successful results in 1930 when a few test wells were sunk. The new law limits the concession to 30 years, and fixes the royalty which must be paid to the government at 10% plus specified annual taxes. The

Atlantic Refining Co., Royal Dutch-Shell, and Standard Oil of New Jersey are already exploring potential fields. Here is a shipment of drilling equipment being unloaded at Havana for Atlantic's new field in Santa Clara province. Following their expropriation in Mexico, several of the oil companies are shifting their drilling activities to Cuba and other countries around the Caribbean.

dends, 97 increased payments, 115 paid the same rate, and 49 slightly reduced their rate. Total disbursement of \$260,000,000 compares with \$117,000,000 in 1933. Mining was responsible for 38% of the total (*BW—Dec. 24 '38, p. 37*). Industrial dividends have increased from \$86,000,000 reported in 1933 to \$162,000,000 this year.

bought this year from the Argentine). If this discrimination is proved it is likely to result in placing the Argentine on our tariff "black list," as was done in the case of Australia several years ago. Efforts are being made now to clear up the situation, but results so far have not been encouraging.

### Fisk in Sweden

FISK TIRES are going to be made in Sweden. The Fisk Rubber Corp. has bought a rubber factory near Gothenburg and is preparing to produce tires, inner tubes, and other rubber goods in Sweden as soon as new equipment is installed. Production at the factory is expected to be between 300 and 500 tires and tubes a day.

### Holland Abandons Free Trade

THE NETHERLANDS PARLIAMENT this week passed a bill authorizing the government to increase import duties by decree. No list of items on which duties will be raised has yet been received in this country, but it is assumed that it will not include any items covered by the reciprocal trade agreement which became effective in February, 1936.

## FOREIGN ANGLES

### Argentine Trade War?

THE OUTLOOK for United States trade with the Argentine is bad, and growing worse. Beginning Jan. 1, no imports will be accepted in the Argentine without an import permit, and these permits are being issued by Argentine authorities only on a very limited number of items. Most recent reports from Buenos Aires even indicate that Argentina is deliberately planning to discriminate against goods coming from the United States because of the mounting deficit in the trade between the two countries (Argentina is buying much more from us than we have

## Quick

LATEST snapshot second. good looks "spells" the mess from

## By The

ON LOCK Tock Sh er's. . . black, of the-box box, "V In Den Shirley-S bootblad ments a dextrous munerat DSS.S.

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## EDITORIALLY SPEAKING

### Quickie

LATEST IN CAMERAS enables us to take snapshots at a speed of 1/100,000 of a second. Now we'll be able to get a real good look at one of those "breathing spells" that the President gives to business from time to time.

### By The Way

ON LOCUST ST., St. Louis, "The Tick Tock Shop," of course, is a watchmaker's. . . . In New York, a colored boot-black, of the stand-and-put-your-foot-on-the-box variety, paints on the side of his box, "Worlds Fair Shines Here." . . . In Denver, in the barber-shop of the Shirley-Savoy Hotel, an equally colored bootblack displays his sign, "Pedal habiliments artistically lubricated with ambidextrous facility for the infinitesimal remuneration of 10¢ per operation. John, D.S.S.S. (Dr. Shoe Shining Science.)"

### If We Fail

"MANAGEMENT," says William L. Batt, president of SKF Industries and head of the International Management Conference, "is being asked by public demand to accomplish the seemingly impossible thing of producing more goods at lower prices, together with more jobs and a higher year's pay. Those demands have not been made easier by the intervention of the government, which has lessened private initiative and courage, which have been so characteristic of American industry. These demands which society has placed on our shoulders are management's problem. We must find the solution because, if we fail, the alternative is what we have seen the peoples of other countries accept." Quite so. And if we do fail, no small part of the responsibility must lie at the door of those who lie awake nights devising new schemes to bedevil business management as it labors to do the "seemingly impossible."

### Apostles

IN SEVERAL QUARTERS moves are under way to enlist the salesmen working out of a city as missionaries for the city itself. Pueblo, Col., is doing it. They're working on it in San Francisco in a big way. Naturally, anything that can be done by a well-informed and aggressive group of missionaries to correct false notions and to build good will for the home town is all to the good. So far as these efforts involve systematic programs of keeping salesmen and traveling buyers posted on what to tell the "foreign" knockers when they get their hammers going, they should be well worthwhile. More power to them!

But in all such self-conscious efforts

lurk certain dangers. In the first place, the town boosters shouldn't expect too much of the salesmen. After all, their job is to sell their goods; they don't collect any commissions on the good will they create for the home town or the arguments they win with crabby customers. If it comes down to a question of getting an order or "setting the old so-and-so straight on the home town," most salesmen will go for the order. And who would say them nay? And don't forget either, that just as soon as an effort of this sort gets a little publicity, a lot of buyers who never would have thought of it before will "take on the salesman for a workout." Human nature is like that.

Then too, the best way to build good will is by what we do rather than by what our salesmen say. What people think of our town is likely to be more influenced by the kind of treatment they get from the town and from its business men than by anything we can say about it. Any salesman-missionary starts with two strikes on him if his own firm and the other home firms are not doing the kind of job that appeals to his prospects. So when we send the salesmen out to "sell the town," let's be sure that we give them a real line of goods.

Finally, we must beware of doing so much squawking at home that we drown out those salesmen. News and noise travel quickly these days. We can't dramatize and publicize our community woes and expect the boys out on the road to talk us down. I recall that a few years back the newspapers in one of the farming states were calling high heaven to witness that their people were being ruined. They filled their pages with good copy to prove it. And all the time their own advertising men were out telling the world about all the money their prosperous readers had to spend for this, that, or what-have-you. I used to feel sorry for those poor devils and wonder how they managed it. So when we send the boys into the trenches to show the outside folks that the old town is on the up-and-up, and that the knocks are the bunk, let's be sure that we don't shoot them in the back by lending substance and color to the knocks.

But if we keep just these few points in mind, the idea itself has much to commend it. Certainly the men and women who travel out of a business town have a stake in the standing and good will of the town with the communities where they do business. And certainly they should know all the answers when they run into unfair or misinformed talk about their town. An organized community spirit will see that they have every chance to know them.

W.T.C.



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# BUSINESS WEEK

*The Journal of Business News and Interpretation*

December 31, 1938

## A Look at the Record

THE ECONOMIC YEAR is ending, not in a blaze of glory, but at a level of activity and in an atmosphere of hope that is in violent contrast with the unhappy New Year of 1938. Then industry was prostrate, unemployment rising, individual and corporate earnings falling, and the outlook bleak.

But the year-end of 1937 was also in sharp contrast with its opening—for the first weeks of 1937 saw a sellers' market, with industry booming, prices advancing, employment increasing, individual and corporate earnings rising. On New Year's Day 1937, it was a common phrase that there was not a cloud on the horizon, that the "irresistible forces of recovery" had at last asserted themselves.

Yet, before the year was out, industry and the stock market were in panicky collapse. On New Year's Day 1938, there was not a patch of blue in the sky; for six months the gloomiest forebodings proved optimistic as against the realities. Then at mid-year, the tide turned and the production index closes the 12 months at a level above that of early 1936, from which started the boom of 1936-37.

In three years, we have had a major boom and a major depression; now we're back where we started.

Nor was this dizzy triennium unique. In 1933, we had a steep three months' boom that whisked the production index from below 70 to above 100 (a somewhat greater climb than was spread over six months this year), only to see almost the whole recovery melt away in the sickening relapse between July, 1933, and September, 1934. And before that, we had had the New Era of 1927-29 and its great Depression.

THUS, IN TEN YEARS we have swung through three major cycles. And the net of a decade is a weakened industrial structure, a chastened spirit of enterprise, an economic suspense that extends from the executive clinging precariously to his desk to the mechanic clinging precariously to his lathe.

And ten years is a long time out of any man's life—for the youth in his twenties just getting started; for the man in his thirties just getting established in his calling; for the man in his forties with his increasing responsibilities; for the man in his fifties, burdened with the realization that once he loses his footing he never will regain it. An economy or an individual can stand adversity and come through it stronger than

ever, but neither an economy nor an individual can stand the whipsaw. The few who have not known the whipsaw of the past decade will not understand this—but they are few, indeed, outside the sheltered ranks of the bureaucrats, who watch the unchanging days glide by until they are eased imperceptibly from the payroll to the pension-roll.

IT SEEMS IRONICAL to speak of the American standard of living or boast of American efficiency against the background of this record. No statistician can figure the average of the highest rate of wages in the world and the largest number of unemployed in the world; or devise an index of efficiency for factories that work at half capacity half the time. And if political phrases could be our salvation, we should have been doubly saved during the past decade: the motto of the New Era was "the abolition of poverty," and that of the New Deal is the "more abundant life." There is no occasion to question the good will of either, but there is plenty of occasion to set both phrases against the record.

The object of these year-end reflections is not to analyze causes, much less to apportion blame. Rather is it to invite all concerned to examine the record with minds free from prejudice and hearts without rancor.

For we shall solve this silly riddle of distress in the lap of plenty only as we resolve to read truly in that record the tale of our individual deeds and misdeeds and appraise honestly our own blame. If each group involved—capital, management, labor, government—will but do that, and then do its best to adjust its special interests to the common good, there is every reason to hope we shall yet make this new upturn another stride in our climb to greater national achievement.

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## "NOTHING TO DO"—UNTIL NEXT YEAR

The London Financial News quotes the general manager of the Royal and Liverpool and London and Globe Insurance companies on the plight of an executive:

"As everybody knows, an executive has practically nothing to do—that is, nothing to do except: to decide what is to be done, to tell somebody to do it, to listen to reasons why it should not be done, or why it should be done by somebody else, or why it should be done a different way, to follow up to see if the thing has been done, to inquire why it has not been done, to follow up a second time, to discover that it has been done, but done incorrectly, to conclude that as long as it has been done, it may as well be left as it is, to consider how much simpler and better it would have been if he had done it himself in the first place, but to realize that such an idea would strike at the very foundation of the belief of all employees that an executive has nothing to do."

SO, AS YOU TURN THIS PAGE, THE LAST PAGE OF OUR 53rd AND LAST ISSUE FOR 1938

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